Commonwealth of Kentucky

Date: June 30, 2013

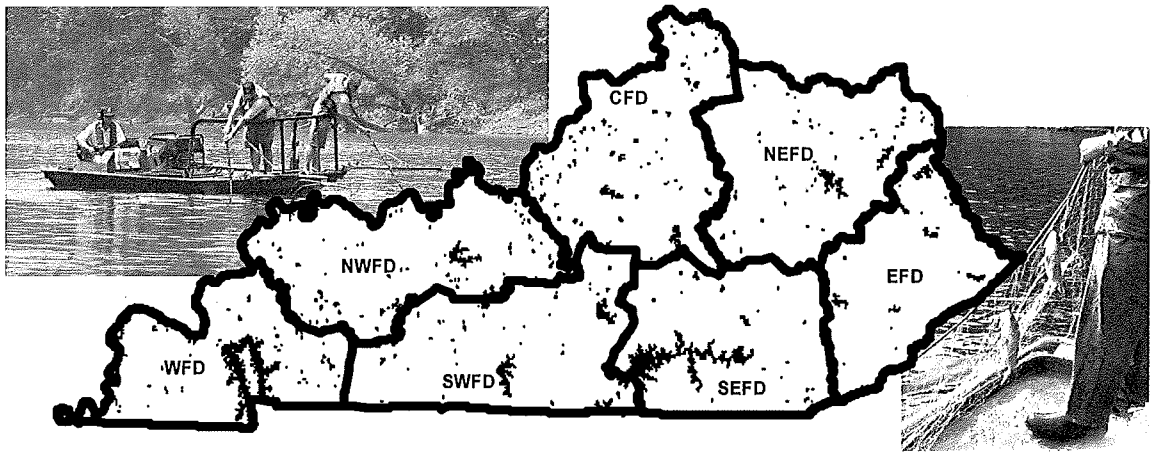
Sport Fish Restoration Grant F-50, Segment 35

Period: 01 April 2012
through
31 March 2013

ANNUAL PERFORMANCE REPORT

District Fisheries Management
Part I

Project 1: Lake and Tailwater Fishery Surveys



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STATE: Kentucky

GRANT NO.: F-50-35

GRANT TITLE: District Fisheries Management

PERIOD COVERED: April 1, 2012 – March 31, 2013

PROJECT: Project A – Lake and Tailwater Sampling

Project Objective: To annually manage and conserve and sport fisheries and habitats throughout 221,680 acres of freshwater lakes, tailwaters, and small impoundments within the Commonwealth of Kentucky in order to provide recreational fishing opportunities to the public.

A. ACTIVITY

Sport fish species were sampled throughout Kentucky using electrofishing, gill netting, trap netting, and other gear to gather biological data in order to best manage the sport fish resources of the Commonwealth. In total, over 78 lakes/reservoirs (encompassing approximately 217,498 acres), in addition to four major tailwaters (approximately 4, 182 acres) were sampled and managed. Otoliths were removed to calculate age/growth from various sport fish species of interest. Other measures were monitored including catch rates, mortality, recruitment, length/weight, water temperature, dissolved oxygen, and other physical limnological data. Creel surveys were conducted on four fisheries of interest and included: (1) Cedar Creek Lake – winter trout creel survey; (2) Stein Lake; (3) Middleton Mills; and (4) Jacobson Park. Data from creel surveys was used to compare with standardized sampling data and obtain measurements concerning the public's catch rates, harvest rates, species of interest, and size of catch. Field staff also attended public meetings, as well as organized fishing group meetings to display catch and abundance data. Results of data obtained during the grant period were analyzed and summarized into the Fisheries Division 2012 Annual Reports. This information is available to the public at their request.

B. TARGET DATES FOR ACHIEVEMENT AND ACCOMPLISHMENT

Planned work achievement date: March 31, 2013
Work accomplished: March 31, 2013

C. SIGNIFICANT DEVIATIONS

None.

D. REMARKS

None.

E. RECOMMENDATIONS

Close this segment of F-50 and continue project into new segment (#36) of F-50.

F. COST

$1,261,960

TABLE OF CONTENTS

Project 1: Lake and Tailwater Fishery Survey

WESTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Sampling conditions for each survey event are listed in Table 1.

Kentucky Lake

Spring sampling for bass was hindered due to record low water levels (356 elevation) at Kentucky Lake. Low water levels keep the bass from moving up shallow around shoreline inundated vegetation. This was the first year since impoundment of the lake (1944) that water levels did not reach summer pool. Sampling was attempted during the normal sampling period (May 1-12) by diurnal electrofishing (120 PPS). However, the water was 3 feet below summer pool elevation. During this sampling 957 bass (95.70 fish/hr) were collected (Table 2). This data follows two consecutive flood years, where sampling was also hindered.

The somewhat questionable data for largemouth bass was used to complete the lake specific assessment and applied toward the Kentucky Lake Fish Management Plan (KLFMP). The population rated "fair" (Table 3). The parameters that use catch rate are probably lower than expected, while the determination of growth for largemouth bass was unaffected by the low water levels. Of the bass that were collected, the PSD values were calculated and reported in Table 4. The PSD value calculated for all largemouth bass was 73, which falls within the targeted range (PSD, 55-75) suggested in the KLFMP. The calculated RSD_{15} was 29, which falls within the range reported in the KLFMP (RSD_{15}, 20-40). The PSD suggests a population with a high density of bass greater than 12.0 inches in length. The RSD suggest a population with a low density of bass greater than 15.0 inches in length. These two number combined suggest a large number of the bass are between 12.0 and 15.0 inches in length.

Age estimates and age frequencies were determined based on a small sample size (n=141) of otoliths collected from largemouth bass during spring sampling. Largemouth bass at Kentucky Lake still demonstrate good growth. The length of age-3 largemouth bass at time of capture is 13.9 in. Most largemouth bass reach harvestable size ($\geq$ 15.0 in) during their fourth growing season (Table 5). One notable observation from the length frequency table is the high catch of age 4 and 5 bass (Table 6). These fish likely represent a strong year class which was also observed as one year old bass during the 2008 survey. The second observation is possibly another strong year class (2011) as suggested by the high catch rate (35.64 fish/hr) of age 1 largemouth bass.

During October 1,005 black bass were collected by diurnal electrofishing (120 PPS) at four locations; Blood River, Jonathan Creek Patterson Bay and Big Bear Creek. This year Patterson Bay area was sampled to target bass using large aquatic weed beds in that area of the lake. Largemouth bass comprised 90% (133.00 fish/hr) of these samples (Table 7). Length and weight data were recorded from all bass collected to calculate relative weight values. The relative weight value for harvestable size largemouth bass was 93 (Table 8). Overall the condition for black bass was good. During this period the threadfin shad density was noted as being very high in the lake. Length-weight equations for black bass species at Kentucky Lake are:

Largemouth bass	Log_{10} (weight) = -3.46279 + 3.13138 x Log_{10} (length)
Smallmouth bass	Log_{10} (weight) = -3.33091 + 2.96673 x Log_{10} (length)
Spotted bass	Log_{10} (weight) = -3.25138 + 2.91232 x Log_{10} (length)

Otoliths were collected from largemouth bass up to 10.0 in during fall sampling. Otoliths were used to age the smaller bass so that age-0 CPUE and growth could be evaluated. The CPUE of age-0 largemouth bass during the fall sample was 63.00 fish/hr (Table 9). This good year class can likely be contributed to the stable water conditions during the spawning period, despite it being lower than normal. The growth of the age-0 largemouth bass continues to be good. Ideally, the age-0 bass should average at least 5.0 in by the fall, which can increase winter survival.

Trap nets were fished for crappie in Blood River and Jonathan Creek embayments for 80 net-nights (nn) during October and November. This sampling effort yielded 1,078 crappie (13.48 fish/nn), of which 4.53 fish/nn (34%) were white crappie and 8.95 fish/nn (66%) were black crappie (Table 10). In comparison to last year's catch, the white crappie was similar while the number of black crappie was down almost by half. One of the management objectives in the KLFMP is to maintain a catch rate of crappie (excluding age 0) of 20.00 fish/nn. This year's sampling yielded 12.94 fish/nn (Table 11). This is the lowest value recorded in the past ten years. It was anticipated that the catch would be up due to previous good year classes.

The crappie population at Kentucky Lake continues to produce a quality fishery. The number of harvestable size crappie has declined due to poor year classes observed in 2006-2008. Good recruitment appears to have occurred from the 2009 and 2010 year classes. The number of crappie ≥8.0 in collected in trap nets was 10.39 fish/nn (Table 11). The number of crappie ≥10.0 in continued to remain low (4.48 fish/nn) as a result of the earlier poor year classes. The KLFMP objective for crappie is to maintain a catch rate of at least 14.00 fish/nn for crappie ≥8.0 in, and 5.00 fish/nn for crappie ≥10.0 in. These values were increased last year to better represent a population status where anglers seemed to be more content with the fishery. In years where our sampling yielded closer to 5.00 fish/nn, anglers complained less about a declining fishery. Maintaining a higher catch rate of adult crappie will require higher catch rates of smaller crappie in prior years. During those years of satisfactory catches of larger crappie by anglers, our sampling yielded catch rates closer to 14.00 fish/nn for crappie ≥8.0 in. PSD and RSD_{10} values are reported in Table 12. Length-weight equations for white and black crappie are listed below. With the density of adult crappie down, it is expected that growth rates will continue to be good or increase slightly.

White crappie $\quad Log_{10}(weight) = -3.58672 + 3.25800 \times Log_{10}(length)$

Black crappie $\quad Log_{10}(weight) = -3.65132 + 3.37301 \times Log_{10}(length)$

The growth management objective in the KLFMP is for age 2 crappie collected in the fall to reach 9.5 inches in length (Table 11). Tables 13 and 14 list age frequencies for white and black crappie collected. Age-1 white crappie made up about 62% of the white crappie sample. The age-2 black crappie made up almost half of the black crappie collected. However, 93% of the black crappie were between ages 1 and 3. One of the management objectives is to maintain a catch of age-1 crappie of at least 11.00 fish/nn (Table 11). This value has been below the management objective for the past few years due to a number of years of poor year classes. Although, recruitment has increased in the past two years, it was still not enough to meet the management objective. Overall, the crappie population at Kentucky Lake rated "fair" (Table 15). This is mainly due to the density of ≥8.0 in crappie in the population and the continued good growth rates.

This was the fourth year of the white crappie stocking project. This year Blood River was stocked with 193,471 (50/a) white crappie fingerlings. Crappie were stocked in the later part of October at two sites (Wildcat Boat Ramp and Sugar Creek Marina). About 70% of these crappie came from a hatchery in Missouri. Four nets were used to determine stocking mortality by holding a sample (50 crappie) overnight. Survival estimates were good this year, averaging 96% from four nets. The water temperature of the lake was near 69 degrees at the time these crappie were stocked.

The initial stocking of white crappie occurred in 2009. Based on the good growth rates of crappie at Kentucky Lake, it was presumed that fish from the first and second stocking would have surpassed the legal size limit of 10.0 in. Since the stocked crappie had been marked with OTC prior to stocking, it was now plausible to see how many of the stocked fish might show up in angler's creels. During October, sixteen anglers were asked to participate in a one day fishing trip in Blood River. They were asked to bring their catch back to the boat ramp, and allow for the removal of the otoliths of the white crappie they harvested. These anglers harvested 123 white crappie during the day. After analysis of the otoliths it was determined that 4.3% of the white crappie harvested (ages 1-4) were marked fish (stocked fish). Of the total number harvested, 2 were age 5. This year class represented a year prior to stocking efforts. Four of the fish were 4 years old, representing the 2009 year class. Five of the fish were 3 years old, representing the 2010 year class. None of these fish were marked (stocked) fish. Of the remaining 112 white crappie, 95% (106 fish) were age 2. These fish represented the 2011 year class, of which 4.7% were marked (stocked) fish. Because of crappies excellent growth at Kentucky Lake, there were 6 crappie that were age 1, and harvested because they were at least 10.0 inches in length. None of these crappie were marked fish.

Lake Barkley

Black bass were collected by diurnal electrofishing (120 PPS) from 9 April–9 May at standardized sampling sites on Lake Barkley. Nine hundred seventy-four black bass were collected at a rate of 84.70 fish/hr (Table 16). Spotted and smallmouth bass accounted for less than 1% of the total black bass sampled. Largemouth bass had a catch rate of 78.35 fish/hr. This catch rate lies below the 10 year average catch rate for largemouth bass (136.21 fish/hr) at Lake Barkley (Table 17). The CPUE of harvestable and stock size bass is also below the past 10 year's average. The low catch rates are assumed to be related to unusual hydrology in the reservoir during our sampling period. An unseasonable lack of rain in the drainage left the water elevation well below normal for this time period. Much of the habitat that is typically utilized by pre-spawn and spawning bass was exposed on the shoreline. As a result, estimates derived from this spring sampling period should be used with caution.

The overall PSD and RSD values for largemouth bass at Lake Barkley, along with values for individual embayments are listed in Table 18. The PSD value (81) exceeded our objective goal (PSD of 55-75) established in the Barkley Lake Fish Management Plan (BLFMP). The RSD_{15} value (35) met the objective goal of 20-40. The PSD is slightly higher than desired, but could likely be due to a lower number of small fish collected because of the drought conditions. The smaller size classes of bass were missing in our samples relative to larger fish which is atypical.

The lake specific assessment score for Lake Barkley has varied between "poor", "fair" and "good" since 2000 (Table 19). The score has been "good" for several years prior to 2010. Flooding conditions in 2010 and 2011, followed by drought conditions in 2012 have probably influenced the sampling resulting in a lower rating.

Otoliths collected from 113 largemouth bass were used from the spring sample to make age and growth analysis (Table 20). The bass continue to have excellent growth rates at Lake Barkley, with bass reaching harvestable size by their fifth growing season. Largemouth bass were collected up to eight years old, with age-3 bass making up 38% of the age distribution (Table 21).

Largemouth bass were sampled in October to collect length-weight data and determine the strength of the 2012 year-class. Six hundred sixty-five largemouth bass were collected at a catch rate of 102.30 fish/hr (Table 22). The length-weight equation for largemouth bass at Lake Barkley is:

$$\text{Log}_{10}\,(\text{weight}) = -3.42076 + 3.09548 \times \text{Log}_{10}\,(\text{length})$$

Very few smallmouth bass and spotted bass were collected during the fall sample and therefore length-weight equations were not calculated. Relative weights are listed in Table 23 for all size-classes of black bass. These values are at or above the 20 year average.

Mean length of the age-0 cohort of largemouth bass was higher than that reported from the 2011 fall sample (6.1 in; Table 24). Previous years have shown consistently strong numbers of age-0 largemouth bass. This year's values are above average (40.60 fish/hr) with the majority of these fish greater than 5.0 inches in length (35.69 fish/hr). Since year-class-strength tends to be related to the relative size of age-0 fish during the fall of their first year, the 2012 year-class should contribute well to the population in coming years.

Trap nets were fished for crappie in Little River and Donaldson Creek embayments for 80 net-nights (nn) from 30 October to 9 November 2012. Six hundred thirty-nine crappie were collected at a rate of 8.03 fish/nn (Table 25). White crappie accounted for 67% of the total catch, and were collected at a rate of 5.34 fish/nn. Black crappie were collected at a rate of 2.69 fish/nn. The CPUE of harvestable-size (≥10.0 in) crappie was well above the ten year average at 3.72 fish/nn (Table 26). In twenty-three years of sampling, this value has ranged from 0.55-3.72 fish/nn. The CPUE of quality-size (≥8.0 in) crappie was 6.27 fish/nn, which is above the management objective (4.0 fish/nn) set in the BLFMP.

In the most recent sample the PSD (95) and RSD_{10} (67) of white crappie were in the upper range of values as compared to the last twenty years (Table 27). The 20-year average PSD and RSD_{10} values of white crappie are 59 and 27, respectively. The PSD (86) and RSD_{10} (33) values of black crappie are very high compared to recent years. As expected, fish from larger year classes produced in 2009 and 2010 are growing into the harvestable size class improving the fishery relative to the previous five years.

The length-weight equations of white and black crappie from Lake Barkley are:

White crappie	Log_{10} (weight) = -3.79362 + 3.50920 x Log_{10} (length)
Black crappie	Log_{10} (weight) = -3.68092 + 3.344346 x Log_{10} (length)

Otoliths from 202 crappie were used for age estimations. Ages ranged from 0-9 years for white crappie and 0-3 years for black crappie (Tables 28 and 29). The majority of fish aged were 2-year-olds. Growth continues to be good as crappie reach 10.0 in between age 2 and 3. Age frequencies were estimated combining catch data with age and growth data. The catch of black crappie was dominated by age-1 and age-2 fish (Table 30) while older black crappie were rare in our catch. The catch of age-2 white crappie (2.89 fish/nn) comprised 63% of the total catch of white crappie (Table 31).

Assessment of the crappie population yielded a rating of "fair" at Lake Barkley in 2012 (Table 32). The category with the biggest decline was the age-0 catch rate (0.43 fish/nn) which could be explained by a poor spawn as a result of low water levels through the spring.

Lake Barkley Creel Survey

A random, non-uniform probability, roving creel survey was conducted on the Kentucky portion (45,600 a) of Lake Barkley from 17 February to 13 November 2012. This survey was different from previous year's surveys. Earlier surveys ran from March through October. The Kentucky portion of the lake was divided into eight creel areas (Appendix A). The survey was conducted five days per week, six hours (h) per day. The overall temporal sampling scheme was twenty days per month, consisting of six weekend days and fourteen weekdays. One hour each day was randomly chosen to conduct an angler count. Varying time period probabilities were assigned to each month. Higher geographic probabilities, resulting in more frequent interviews, were assigned to the Little River and Eddy Creek areas from March through May, and October, than were assigned to the other six areas. Equal probabilities were assigned to all areas from June to September. An angler attitude questionnaire concerning fishing in Lake Barkley was conducted by the creel clerk throughout the survey period (Appendix B).

Angler effort, number of fish caught, and number of fish harvested are reported in Table 33. These values were 30-40% higher than results from a similar survey done in 2008. In 2012 the angler effort and success was similar to the numbers recorded in the late 1980's and early 1990's. Water levels and weather are key factors to fishing effort on Lake Barkley. The drought conditions may not have affected angler effort; however catch and harvest were possibly lower. Table 34 lists the species caught and the length frequency for those fish harvested and released. Overall, anglers spent more hours fishing for bass (114,356) and crappie (39,917) than other species (Table 35). The effort for these two species was similar to previous year's surveys, except the effort for crappie was up from the 2008 survey. This to be expected since the crappie fishery suffered from poor year classes just prior to 2008. However, good year classes in 2009 and 2010 expanded the population, yielding better fishing hence more angler effort.

Crappie accounted for about 35% of all the fish harvested by number during this creel survey. Crappie anglers accounted for 17% of fishing trips to Lake Barkley in 2012. Most crappie anglers are meat fishermen, in that only 10% of the harvestable size crappie were released. March, April, and November were the busy months for crappie anglers, accounting for 72% of the total crappie caught (Table 36). Almost as many crappie were harvested in November (47,640) as was March and April combined (48,202). However, the spring drought likely affected crappie fishing success. This shows the importance of collecting data on the crappie fishery in the winter months. In past surveys, November data was not collected likely causing a misrepresentation of the crappie fishery. In 2012 anglers caught 249,999 white crappie and 65,151 black crappie (Table 37). These values represent about a fourfold increase when compared to those recorded in 2008. The 2012 values are similar to values recorded in earlier surveys from the 1990's.

Black bass anglers accounted for about 50% of all fishing trips to Lake Barkley (Table 35). Black bass accounted for 14% of the harvested fish in this survey. Those who targeted black bass enjoyed a catch rate of 1.03 fish/hr (Table 38). As expected, the catch of bass was highest in April, May, and June, representing 64% of the bass caught throughout the year. The harvest rate for largemouth bass was very low as in years past (0.08 fish/hr; Table 38). Most bass anglers fish for the sport of it, and practice catch and release. Anglers reported only harvesting 26% of the harvestable size bass that were caught. Table 39 shows the relative size and number of species of black bass caught and harvested in 2012. The number of largemouth bass and spotted bass that were caught in 2012 was double that recorded in 2008 and the number of smallmouth bass caught was three times the number caught in 2008.

Panfish anglers accounted for about 8% of all trips taken to Lake Barkley (Table 35). Bluegill comprised 83% of the panfish harvested while redear sunfish made up the remainder (Table 40). The number of redear caught increased almost three fold from the 2008 creel survey. Almost 54% of the panfish were harvested during May (Table 41).

Catfish anglers accounted for 8% of all fishing trips to Lake Barkley (Table 35). The fishing effort for catfish has declined by half since the 2008 survey. When broken down by species, channel catfish harvest has declined in weight and number while blue catfish have increased since 2008. Anglers reported catching 52,217 channel catfish and harvesting 30,061 of them in 2012, a decrease from 64,363 and 54,569 reported in 2008. Channel catfish made up 56% of the catfish harvested by weight (Table 42). The highest catch of catfish occurred in May and June (Table 43).

Less than 2% of all fishing trips to Lake Barkley were for *Morones* (white bass, yellow bass, striped bass and hybrids) (Table 35). These survey results are similar to that reported during 2008 creel survey. The estimated catch of white bass was 48,494 (Table 44). This was higher than the 42,533 reported in 2008. The white bass made up 70% of the *Morones* caught. Harvest by anglers targeting these fish was 1.20 fish/hr. The catch and harvest of yellow bass made up 47% and 21% of the *Morones* in this survey, respectively. April, May, and November are the months where the highest catch of *Morones* were recorded (Table 45).

Lake Beshear

Largemouth bass were collected by diurnal electrofishing during April at Lake Beshear. Two hundred eighty-seven largemouth bass were collected at a rate of 114.80 fish/hr (Table 46). This year the catch rate of bass less than 8.0 in was much higher (48.00 fish/hr) than that recorded in 2011 (16.50 fish/hr). The catch rate of harvestable-size (≥12.0 in) largemouth bass was 46.80 fish/hr. One objective in the Lake Beshear Fish Management Plan (LBFMP) is to maintain a catch rate of 40.00 fish/hr for harvestable-size largemouth bass. Other objectives are to maintain a high catch rate of bass ≥15.0 and ≥20.0 in. Ideally, these catch rates should be greater than 30.00 and 4.00 fish/hr, respectively. The catch rate for the number of largemouth bass ≥15.0 in was 38.00 fish/hr, while the catch rate for the larger (≥20.0 in) bass was 4.40 fish/hr (Table 47). Lake Beshear continues to have a quality bass fishery with high numbers of bass ≥ 15.0 in. The fishery has rated "good" for the past several years.

Largemouth bass were collected by diurnal electrofishing in October (Table 46). The catch rate (82.40 fish/hr) was slightly lower than the 2011 fall catch rate. Relative weight data suggests that the larger bass (≥15.0 in) are healthy with regard to their length-weight ratio. The average relative weight value was 95 for these larger bass and 87 for all sizes of bass. The length-weight equation for largemouth bass at Lake Beshear is:

$$\text{Log}_{10}\,(\text{weight}) = -3.64583 + 3.27973 \times \text{Log}_{10}\,(\text{length})$$

Otoliths were removed from a subsample of largemouth bass ≤ 10.0 in to determine the mean fall length of the age-0 cohort, and determined their catch rate. The catch rate for this year class was 34.00 fish/hr (Table 48). The average length of the age-0 bass was 6.3 in.

The catfish population was assessed during a week of sampling in May using multiple sampling methods. Nine hoop nets were fished in sets of three, and baited with meal. These nets were set on Tuesday and pulled on Friday morning. Five trotlines with 100 hooks per line were fished. The trotlines were baited with cut shad and cheese bait. The lines were fished for three days and run each day, while resetting them to fish the next night. Four (900 second) low-pulse (15 PPS) electrofishing runs were also made to sample the catfish population.

During the electrofishing sampling, only five blue catfish were collected. The trotlines yielded 143 blue catfish (9.53 fish/nn) and 77 channel catfish (5.13 fish/nn). The hoop nets yielded a catch of 4 blue catfish (1.33 fish/nn) and 283 channel catfish (94.33 fish/nn). For both species, most (90%) fish ranged in length from 13.0 to 17.0 in. The length frequency for the catfish, regardless of method caught, is illustrated in Table 49. The condition of the catfish was fair, with relative weight values of 85 and 89 for blue and channel catfish, respectively (Table 50).

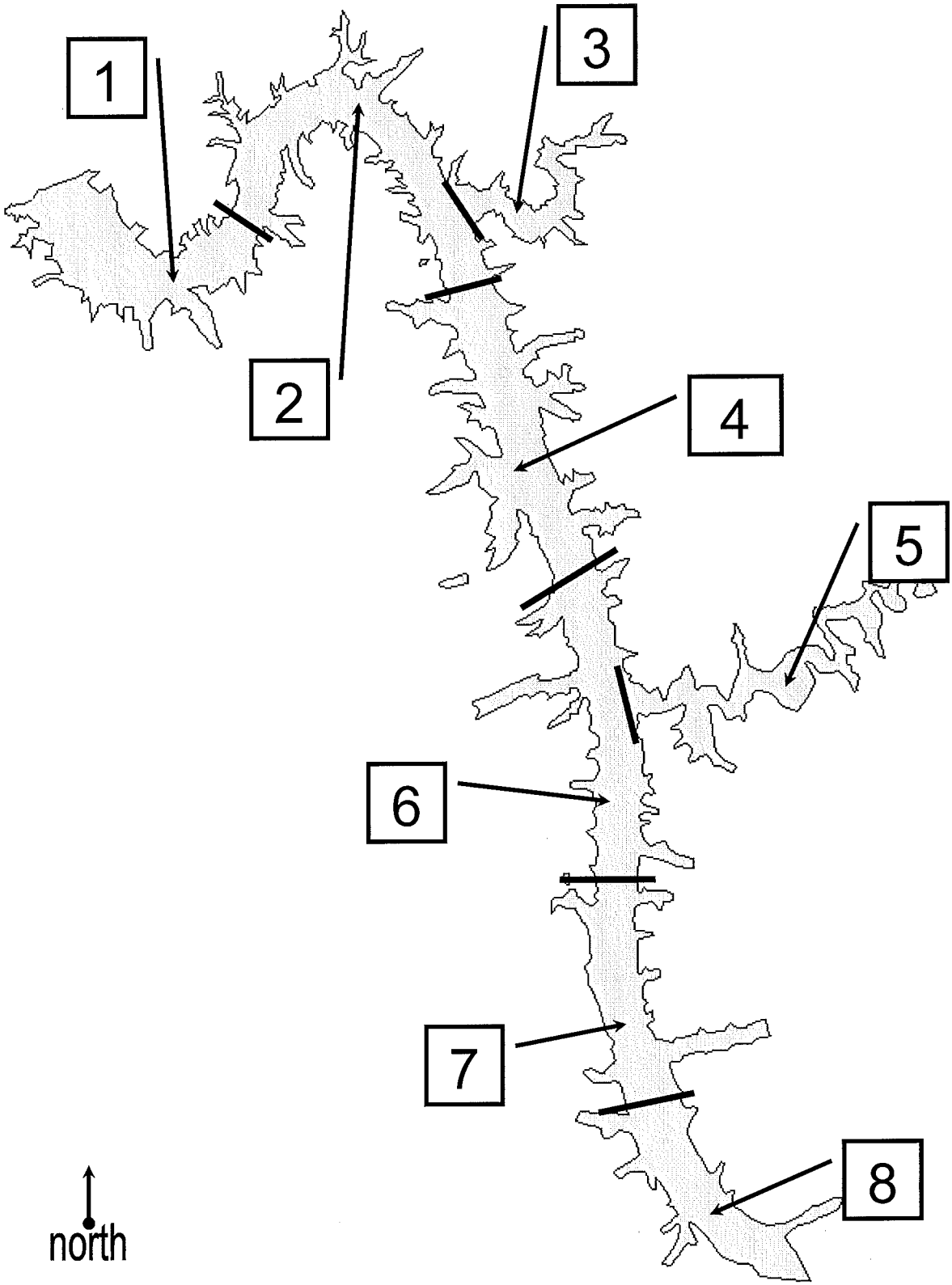
Otoliths were collected from a subsample of blue and channel catfish to estimate age and make growth determinations. There were 46 blue catfish and 57 channel catfish that were aged. Blue catfish were represented by three year classes; age 4, 6 and 8 (Table 51). This coincides with their stocking as age one fish in 2005, 2007 and 2009. Blue catfish were stocked in 2006, but this year class was not represented in the sample. Blue catfish have been stocked at about 0.5 fish per acre each of these years. The growth of the blue catfish was determined to be slow (Table 52). The age frequency for all blue catfish collected is illustrated in Table 53.

The channel catfish also show similar signs of slow growth (Table 54). The channel catfish that were aged ranged in age from 1 to 15 (Table 55). Channel catfish had not been stocked in Lake Beshear during some of the year classes represented. Therefore it is assumed that the channel catfish from those year classes would have to be from natural spawning in the lake and not stocking. This is the first documentation of channel catfish spawning in the lake. However, since these age classes made up only 32% percent of the sample, it is doubtful that spawning would sustain the channel catfish population in Lake Beshear. Table 56 illustrates the age frequency for all the channel catfish caught.

Lake Pennyrile

Lake Pennyrile underwent a major drawdown this year in order for work to be completed on the beach and boat dock area of the lake. Access to the lake was limited. It will be interesting to sample the populations after two years of extreme drawdown.

Appendix A. Lake Barkley creel survey areas, 2012.



Appendix B. LAKE BARKLEY ANGLER ATTITUDE SURVEY 2012

1. Have you been surveyed this year? Yes - stop survey No – continue

2. Name _____ **(Optional)** and Zip Code _____

3. Have you ever fished at Lake Barkley before? Yes 97.4% No 2.6% N=193

4. How many times do you fish Lake Barkley each year? N-191

   1 to 4 33% 5-10 20.9% More than 10 46.1%

5. Which species of fish do you fish for at Lake Barkley (**check all that applies**)?

   Redear 23.3% Black Bass 68.4% Crappie 56.0% Catfish 25.9% White bass 13.5%

6. Which one species do you fish for most at Lake Barkley (**check only one**)? N=185

   Redear 3.8% Black Bass 57.3 Crappie 27.0% Catfish 9.7% White bass 2.2%

-Answer the following questions for each species you checked in question 5

Redear Anglers

7. In general, what level of satisfaction do you have with redear fishing at Lake Barkley? N=49

   Very satisfied 22.4% Somewhat satisfied 36.7% Neutral 16.3% Somewhat dissatisfied 14.3% Very dissatisfied 14.1% No opinion 6.1%

7a. If you responded with somewhat or very dissatisfied in question (7) – what is the single most important reason for your dissatisfaction? N=9

   Number of fish 77.8% Size of fish 11.1% Not happy with regulations 0.0%
   Too many anglers 0.0% Don't know how to catch them 11.1%

Crappie Anglers

8. In general, what level of satisfaction do you have with crappie fishing at Lake Barkley? N=106

   Very satisfied 47.2% Somewhat satisfied 32.1% Neutral 9.4% Somewhat dissatisfied 6.6% Very dissatisfied 0.9% No opinion 3.8%

8a. If you responded with somewhat or very dissatisfied in question (8) – what is the single most important reason for your dissatisfaction? N=7

   Number of fish 57.1% Size of fish 0% Not happy with regulations 14.3% Too many anglers 14.3% No White Crappie 14.3%

Black Bass Anglers

9. In general, what level of satisfaction do you have with the black bass fishing at Lake Barkley? N=131

   Very satisfied 64.1% Somewhat satisfied 22.1% Neutral 7.6% Somewhat dissatisfied 5.3%
   Very dissatisfied 0.0% No opinion 0.8%

9a. If you responded with somewhat or very dissatisfied in question (9) – what is the single most important reason for your dissatisfaction? N=8

Number of fish 62.5% Size of fish 37.5% Not happy with regulations 0.0% Too many anglers 0.0% Don't know how to catch them 0.0%

Catfish Anglers

10. In general, what level of satisfaction do you have with the catfish fishing at Lake Barkley? N=49

Very satisfied 57.1% Somewhat satisfied 24.5% Neutral 6.1% Somewhat dissatisfied 4.1 Very dissatisfied 0% No opinion 8.2%

10a. If you responded with somewhat or very dissatisfied in question (10) – what is the single most important reason for your dissatisfaction? N=2

Number of fish100% Size of fish 0% Not happy with regulations 0%
Too many anglers 0% Too much commercial fishing 0%

All Anglers

11. Are you satisfied with the current size and creel limits on all sport fish at Lake Barkley? N=192 Yes 93.8% No 6.3%

If NO:

11a. If not, which species are you dissatisfied with and what size and creel limits would you prefer?

Black Bass:
Size limits: 12", 14", 15" + 1 under, 18"
Creel Limits: 2, 5, June-August: 3 fish

Crappie:
Size limits: 12", Black Crappie 8"
Creel limits: 15

12. Did you use live fish as bait anywhere in Kentucky last year? N=192

Yes 84.4% No 15.6%

12a. Have you fished with an Alabama Rig or an Umbrella Rig at Lake Barkley? N=162

Yes 34.0% No 66.0%

12b. Choose any of the following statements that you agree with. Alabama Rigs/Umbrella Rigs

- □ Increase the number of bass that I catch 15.0%
- □ Increase the size of bass that I catch 6.2%
- □ Cause harm to fish due to foul hooking 9.3%
- □ Other 62.7%

Of the other category, 26.5% had no opinion, 41.6% were negative such as "unfair" and "outlaw it", and 6.8% were positive such as "don't outlaw it" and "limited foul hooking".

13. Are you aware that Asian Carp are present in Lake Barkley? N=193

Yes78.8% No 21.2

13a. How much have Asian Carp negatively affected your recreational experience at Lake Barkley? N=152

None 77.0% A little 19.1% A lot 3.9%

Table 1. 2012 yearly summary of sampling conditions by waterbody, species sampled and date.

Water body	Location	Species	Date	Time (hr)	Gear	Weather	Water temp. °F	Water level	Secchi (in)	Water Conditions	Pertinent sampling comments
Barkley	Nickel Branch	black bass	4/9/2012	1.0	electrofisher	warm		355.0		rough	early sample due to early warm up, low water
Barkley	Demumbers	black bass	4/23/2012	2.0	electrofisher	cloudy	62.0	356.4		calm	low water, low numbers
Barkley	Little River	black bass	4/26/2012	2.0	electrofisher	sunny	65.4	356.5		rough	low water
Barkley	Eddy Creek	black bass	4/30/2012	2.5	electrofisher	sunny	69.0	356.4	32	calm	low water
Barkley	Fords/Donaldson	black bass	5/8/2012	2.0	electrofisher	sunny	76.0	356.0	30	calm	low water
Barkley	Kuttawa	black bass	5/9/2012	2.0	electrofisher	sunny	75.8	356.0	24	calm	low water
Barkley	Little River	black bass	10/15/2012	2.5	electrofisher	sunny	63.0	356.2		calm	normal conditions, good sample
Barkley	Nickel/Demumbers	black bass	10/18/2012	1.5	electrofisher	sunny	63.0	356.0		calm	normal conditions, good sample
Barkley	Eddy Creek	black bass	10/24/2012	2.5	electrofisher	sunny	62.0	356.3		calm	normal conditions, good sample
Barkley	Donaldson	crappie	10/30/2012	40 nn	trapnet		56.0	354.0		normal	good sample
Barkley	Little River	crappie	11/6/2012	40 nn	trapnet	overcast cool	52.0	354.6		normal	good sample
Beshear		black bass	4/18/2012	2.5	electrofisher	calm/sunny	65.1	normal	92	calm	normal conditions, good sample
Beshear		catfish	5/29/2012	1.0	electrofisher/lp	calm/sunny	83.0	low	102	calm	low pulse electrofishing, poor sample
Beshear		catfish	5/29/2012	15 nn	trotlines	calm/sunny	83.0	low	102	calm	5 100-hook trotlines baited with cut shad and cheese bait set for three nights, good sample
Beshear		catfish	5/29/2012	3 nn	tandom hoop nets	calm/sunny	83.0	low	102	calm	3 trandom hoop nets set batied with cheese fished for three nights before being pulled, good sample
Beshear		black bass	10/22/2012	2.5	electrofisher/lp	calm/sunny	63.0	low	48	calm	fair sample
Kentucky	Blood River	black bass	5/1/2012	2.5	electrofisher	sunny	69.5	356.1	30	calm/stable	lake did not make it to summer pool elevation, so sampling areas were not standardized
Kentucky	Jonathan	black bass	5/2/2012	2.5	electrofisher	clear/windy	73.2	356.1	30	rough/stable	lake did not make it to summer pool elevation, so sampling areas were not standardized
Kentucky	Big Bear	black bass	5/3/2012	2.0	electrofisher	sunny	71.2	356.0	30	calm/stable	lake did not make it to summer pool elevation, so sampling areas were not standardized
Kentucky	Sugar Bay	black bass	5/4/2012	2.5	electrofisher	overcast	73.0	356.6	30	rough/rising	lake did not make it to summer pool elevation, so sampling areas were not standardized
Kentucky	Blood River	black bass	10/16/2012	2.5	electrofisher	sunny	65.0	355.9		calm/stable	good sample
Kentucky	Patterson Bay	black bass	10/18/2012	1.0	electrofisher	clear/windy	64.7	355.8	36	rough/stable	too windy to sample out of embayments / targeting weed beds
Kentucky	Big Bear	black bass	10/19/2012	1.0	electrofisher	overcast/windy	60.0	256.3		rough/rising	fair sample
Kentucky	Jonathan	black bass	10/23/2012	2.5	electrofisher	sunny	61.0	356.3	30	calm/falling	good sample
Kentucky	Jonathan	crappie	10/30/2012	40 nn	trapnet	overcast/rainy	52.0	354.6	30	choppy/stable	most of the week windy, overcast with cold front, fair sample
Kentucky	Blood River	crappie	11/6/2012	40 nn	trapnet	overcast/cool	54.0	354.4	34	calm/stable	calm early in week with rain later in week with cold front, fair sample

Table 2. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 10.0 hours (20 x 30-minute runs) of diurnal electrofishing at Kentucky Lake during May 2012. This year the lake level never made it to summer pool. Sampling was conducted, but not in normal habitat areas.

	Inch class																				
Area	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	Std err
Blood River																						
Smallmouth bass			1				2	1												4	1.60	0.40
Spotted bass	1					2	3	1	1	1										9	3.60	2.23
Largemouth bass		4	18	18	8	4	3	11	20	21	32	31	12	4	3				1	190	76.00	12.38
Jonathan Creek																						
Spotted bass		1				3	1													5	2.00	1.26
Largemouth bass	3	7	14	11	11	4	7	23	13	29	46	27	10	1	4	1	1	1		213	85.20	13.76
Big Bear																						
Smallmouth bass	1		2		1		2													6	3.00	0.75
Spotted bass			1					2	4	4	3									14	7.00	4.60
Largemouth bass	2	8	33	48	19	6	3	7	21	20	48	29	12	6	5	4	3	1		275	137.50	15.09
Sugar Bay																						
Smallmouth bass	6	13	13	8	1	4	1	2				2								50	20.00	3.29
Spotted bass	2	1			1		1		2											7	2.80	1.36
Largemouth bass	1	7	38	44	39	14		3	4	4	11	11	4	1	1	1	1			184	73.60	7.93
TOTAL																						
Smallmouth bass	7	13	16	8	2	4	5	2			1	2								60	6.00	2.02
Spotted bass	3	2	1		1	5	5	3	7	5	3									35	3.50	1.30
Largemouth bass	6	26	103	121	77	28	13	44	58	74	137	98	38	12	13	6	5	2	1	862	86.20	6.65

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Table 3. Lake specific assessment for largemouth bass collected at Kentucky Lake from 2003 - 2012. This table includes the parameter estimates and the individual score as well as the total score and assessment rating. The final two columns list the instantaneous mortality (Z) and annual mortality (A). Data tabulated in 2010-2012 is questionable due to poor sampling conditions.

	Mean length		Length group						
	age-3 at	CPUE	12.0 - 14.9 in	≥15.0 in	≥20.0 in	Total	Assessment		
Year	capture	age-1	CPUE	CPUE	CPUE	score	rating	Z	A
2003[A]	13.7	30.12	43.62	15.62	0.95			0.728	51.7
Score	4	2	3	2	1	12	G		
2004[A]	13.7	12.14	22.70	18.10	1.30			0.697	50.2
Score	4	1	2	2	1	10	F		
2005	13.8	28.70	46.50	23.60	0.80			0.639	47.2
Score	4	2	3	3	1	13	G		
2006[A]	13.8	31.79	23.60	20.90	0.60			0.666	48.6
Score	4	2	2	3	1	12	G		
2007[A]	13.8	22.16	28.75	26.08	1.25			0.560	32.2
Score	4	1	2	4	1	12	G		
2008[A]	13.8	73.08	19.05	24.19	1.90			0.575	43.7
Score	4	4	2	3	2	15	G		
2009[A]	13.8	27.92	24.34	13.52	1.38			0.429	34.9
Score	4	2	2	1	1	10	F		
2010*	13.8	34.43	42.87	12.43	1.30				
Score	4	2	3	1	1	11	F		
2011*	12.9	7.43	34.00	8.57	0.86				
Score	3	1	2	1	1	8	F		
2012*	13.9	35.64	26.90	17.50	0.80			0.588	44.5
Score	4	2	2	2	1	11	F		
Average	13.7	30.34	31.23	18.05	1.11			0.610	44.1

Data from 1985 to 2002 is listed in previous years reports.

[A] age and grow th data w as not collected. Previous year's data used for age estimates.

2010* and 2011* samples w ere hampered by high w ater levels during flooding, sample w as later than normal; overall a poor sample and not all embayments w ere sampled.

2012* sample w as hampered by low w ater levels during drought.

Rating
5-7 = Poor (P)
8-11 = Fair (F)
12-16 = Good (G)
17-20 = Excellent (E)

(Kentucky Bass Database.xls)

Table 4. PSD and RSD values calculated for black bass species collected during diurnal electrofishing at Kentucky Lake during May 2012; 95% confidence limits are in parentheses.

Area	Species	No. fish ≥8.0 in	PSD	(+/- 95%)	RSD[a]	(+/- 95%)
Blood River	Largemouth bass	48	83	(+/- 6)	34	(+/-8)
Jonathan Creek	Largemouth bass	46	74	(+/- 6)	25	(+/- 6)
Big Bear	Largemouth bass	110	81	(+/- 6)	33	(+/-7)
Sugar Bay	Largemouth bass	129	40	(+/- 10)	20	(+/-8)
TOTAL	Largemouth bass	333	73	(+/- 4)	29	(+/- 4)
	Spotted bass	7	62	(+/- 18)	10	(+/- 11)
	Smallmouth bass	46	21	(+/- 17)	13	(+/- 14)

[a]Largemouth bass = RSD_{15}, Spotted and smallmouth bass = RSD_{14}

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Table 5. Mean back-calculated length (in) at each annulus for largemouth bass including the range in length at each age and the 95% confidence interval of each age group. Otoliths were collected from Kentucky Lake in the spring 2012.

		Age								
Year class	N	1	2	3	4	5	6	7	8	9
2011	49	7.4								
2010	28	6.8	11.1							
2009	6	7.6	12.1	13.8						
2008	14	7.8	11.1	12.9	14.2					
2007	25	8.8	12.2	13.8	15.2	16.0				
2006	6	7.9	13.0	15.1	16.3	17.4	18.0			
2005	7	7.6	12.5	15.0	16.7	17.8	18.6	19.4		
2004	3	8.8	13.5	15.9	17.3	18.1	18.9	19.4	20.0	
2003	3	7.3	11.9	14.1	16.3	17.2	17.9	18.8	19.5	20.2
Mean		7.6	11.8	14.0	15.4	16.7	18.4	19.2	19.7	20.2
Smallest		4.7	8.9	10.6	11.9	12.9	16.7	17.7	18.4	19.0
Largest		11.3	14.6	16.6	18.7	19.1	19.6	20.2	20.2	21.1
Std Err		0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.6
Low 95% CI		7.4	11.5	13.6	15.0	16.3	18.0	19.9	19.2	19.0
High 95% CI		7.9	12.1	14.3	15.8	17.1	18.7	19.7	20.3	21.5

* Intercept = 0.

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Table 6. Age frequency and CPUE (f/hr) of largemouth bass collected during 10 hours of shoreline electrofishing on Kentucky Lake during May 2012. Otoliths were collected this year to make age and growth, and age frequency estimates.

	Inch class																				
Age	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	%	CPUE	Std err
1	6	26	103	121	77	22	2												357	41	35.70	5.32
2						6	11	44	48	9									118	14	11.80	4.61
3									5	9	55								69	8	6.90	0.90
4										56	41	30	5						132	15	13.20	1.69
5									5		41	68	28	9	4				155	18	15.50	1.89
6													5	3	5	1			14	2	1.40	0.24
7															4	3	2		9	1	0.90	0.22
9																1	2		3	0	0.30	0.17
10																1	1	2	4	0	0.40	0.17
Total	6	26	103	121	77	28	13	44	58	74	137	98	38	12	13	6	5	2	861		86.10	
%	1	3	12	14	9	3	2	5	7	9	16	11	4	1	2	1	1	0		100		

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Table 7. Species composition, relative abundance and CPUE (fish/hr) of black bass collected during 7.0 hours (14 x 30-minute runs) of diurnal electrofishing at Kentucky Lake during October 2012.

	Inch class																					
Area / Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	22	Total	CPUE	Std Err
Blood River																						
Smallmouth bass	2	5	13	2	2	1	1	1				2		2			1			32	12.80	5.00
Spotted bass		1																		1	0.40	0.40
Largemouth bass		13	48	60	43	21	10	27	21	15	17	26	32	16	19	6	1			375	150.00	11.01
Jonathan																						
Smallmouth bass			4	1	3	3	3		3		1	2		1						21	8.40	8.06
Spotted bass		1				1				2	1	1								6	2.40	1.00
Largemouth bass	1	13	25	20	9	6	27	23	10	14	23	19	14	11	5	4	2	3		229	91.60	36.50
Big Bear																						
Smallmouth bass			3	1	1	1		1				1								8	8.00	4.00
Spotted bass					1															1	1.00	1.00
Largemouth bass		3	4	6	2	5	5	9	7	4	8	18	7	6	5	2	2		1	94	94.00	2.00
Patterson Bay																						
Smallmouth bass		1	2	1		1														5	5.00	5.00
Largemouth bass	2	18	37	43	41	23	13	5	9	4	2	14	8	9	4		1			233	233.00	35.00
TOTAL																						
Smallmouth bass	2	6	22	5	6	6	4	2	3		1	5		3			1			66	9.43	2.55
Spotted bass		2			1	1				2	1	1								8	1.14	0.40
Largemouth bass	3	47	114	129	95	55	55	64	47	37	50	77	61	42	33	12	6	3	1	931	133.00	14.80

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Table 8. Number of bass and relative weight (Wr) for each length group of black bass collected at Kentucky Lake during October 2012. Standard errors are in parentheses.

		Length group								
		8.0-11.9 in			12.0-14.9 in			≥15.0 in		
Species	Area	No.	Wr		No.	Wr		No.	Wr	
Largemouth bass	Blood River	79	97	(1)	58	92	(1)	74	93	(1)
	Jonathan Creek	66	89	(1)	56	86	(2)	39	90	(1)
	Patterson Bay	50	99	(1)	20	95	(2)	22	99	(2)
	Big Bear	26	89	(2)	30	84	(2)	23	91	(2)
	Total	221	94	(1)	164	89	(1)	158	93	(1)

		Length group								
		7.0-10.9 in			11.0-13.9 in			≥14.0 in		
Species	Area	No.	Wr		No.	Wr		No.	Wr	
Spotted bass	Blood River									
	Jonathan Creek	1	102	(6)	3	88	(3)	1	88	
	Big Bear	1	97							
	Total	2	100	(3)	3	88	(3)	1	88	
Smallmouth bass	Blood River	6	87	(4)	1	94		5	79	(2)
	Jonathan Creek	9	89	(4)	4	72	(1)	3	84	(7)
	Patterson Bay	1	100							
	Big Bear	3	86	(7)				1	76	
	Total	19	88	(3)	5	77	(4)	9	80	(3)

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Table 9. Age-0 CPUE (f/hr) and mean length (in) of largemouth bass collected in the fall, and CPUE of age-1 largemouth bass collected the following spring during diurnal electrofishing at Kentucky Lake.

	Age 0[A]		Age 0[A]		Age 0 ≥5.0 in[A]		Age 1[B]	
Year class	Mean length	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err
2001	5.6	0.08	23.20	4.80	18.40	3.66	35.50	5.26
2002	5.7	0.12	36.20	9.62	23.40	4.13	30.90	0.00
2003	4.9	0.08	30.67	5.57	15.67	2.01	11.99[C]	0.00
2004	4.6	0.09	26.00	6.16	9.83	1.66	28.70[C]	5.60
2005	5.0	0.14	17.80	4.07	10.00	1.71	31.79	6.69
2006	4.8	0.13	19.00	3.77	8.80	1.72	22.16[C]	3.95
2007	7.1	0.06	122.20	26.51	106.40	24.60	73.05[C]	8.57
2008	5.8	0.08	33.80	6.94	27.20	4.81	27.92[C]	5.03
2009	5.0	0.09	30.91	5.42	16.73	2.83	34.43[C]	5.90
2010	5.7	0.09	24.25	4.87	17.38	2.63	7.43*	1.56
2011	5.7	0.05	75.87	8.34	54.13	6.44	35.64*	5.32
2012	6.4	0.05	63.00	13.89	55.86	12.5		
Average	5.5		41.91		30.32		32.73	

[A] Data collected by fall (October) diurnal electrofishing. Mean lengths were determined by analysis of otoliths removed from a subsample of LMB <8.0 in and extrapolated to the entire catch of the fall sample. In 2011 and 2012 bass up to 10.0 in were collected for analysis.

[B] Data from diurnal electrofishing samples collected the following spring (April/May).

[C] Age data was not collected, this is an estimate based off previous years age data.

*2011 Spring data was a poor sample due to high water levels.
*2012 Spring data was a poor sample due to low water levels.

Data from 1990 to 2000 is listed in previous years reports.

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Table 10. Species composition, relative abundance, and CPUE (fish/nn) of crappie collected by trap nets fished during 80 net-nights in two embayments of Kentucky Lake during October - November 2012.

		Inch class																
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total	CPUE	Std err
Blood River	White crappie	1	8	1	3	3	5	8	11	3	8	2	1	1		55	1.38	1.38
	Black crappie		2	3	3	12	35	53	105	55	35	3	1	2		309	7.73	7.73
Jonathan Cr.	White crappie	1	4	6	1	11	44	49	92	70	20	4	2	2	1	307	7.68	7.68
	Black crappie		10	4	13	36	41	67	88	124	16	5	2	1		407	10.18	10.18
TOTAL	White crappie	2	12	7	4	14	49	57	103	73	28	6	3	3	1	362	4.53	4.53
	Black crappie		12	7	16	48	76	120	193	179	51	8	3	3		716	8.95	8.95

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Table 11. Crappie population parameters used to manage the population at Kentucky Lake, with values determined from fall trap netting.

Year	Total CPUE (fish/nn) excluding age-0			CPUE (fish/nn) age-0			Mean length (in) age-2 at capture			CPUE (fish/nn) for crappie ≥8.0 in			CPUE (fish/nn) age-1			CPUE (fish/nn) for crappie ≥10.0 in		
	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie
2001	4.69	22.59	27.28	26.76	24.52	51.28	10.8	9.3	9.8	2.21	12.55	14.76	2.34	9.67	12.01	1.29	3.17	4.46
2002	3.90	15.14	19.04	0.71	3.06	3.77	10.8	9.9	10.4	2.74	8.60	11.34	3.30	9.80	13.10	0.68	4.21	4.89
2003 [A]	3.75	20.33	24.08	10.46	5.40	15.86	10.8	9.9	10.4	2.55	6.20	8.75	2.34	15.52	17.86	1.35	1.76	3.11
2004	7.47	32.46	39.93	0.65	0.98	1.63	10.8	9.2	9.7	2.71	11.67	14.38	6.20	18.60	24.80	1.09	2.99	4.08
2005 [A]	3.91	22.75	26.66	2.29	1.92	4.21	10.8	9.2	9.7	2.45	13.78	16.23	2.55	10.31	12.86	1.12	3.42	4.54
2006 [A]	2.62	16.07	18.69	1.24	1.18	2.42	10.8	9.2	9.7	1.60	11.86	13.46	1.68	6.60	8.28	1.10	2.78	3.88
2007	1.50	13.59	15.09	0.48	1.88	2.36	11.2	10.2	10.7	1.50	11.73	13.23	0.85	7.21	8.06	0.74	5.50	6.24
2008 [A]	0.36	14.92	15.28	0.35	1.43	1.78	11.2	10.2	10.7	0.36	12.95	13.31	0.16	6.15	6.31	0.21	8.25	8.46
2009	2.03	14.17	16.20	1.35	2.03	3.38	11.5	10.4	10.6	1.63	11.95	13.58	1.83	3.02	4.85	0.29	10.09	10.38
2010 [A]	5.20	13.48	18.68	9.14	3.70	12.84	11.5	10.4	10.6	2.68	5.73	8.41	4.08	8.96	13.04	1.90	3.29	5.19
2011	3.15	15.60	18.75	2.34	1.06	3.40	10.5	9.6	10.0	2.03	10.29	12.31	2.32	6.69	9.01	0.90	2.50	3.40
2012 [A]	4.20	8.74	12.94	0.03	0.21	0.24	10.5	9.6	10.0	3.43	6.96	10.39	2.80	2.47	5.27	1.43	3.05	4.48
Average	3.56	17.49	22.09	4.65	3.95	9.95	10.9	9.8	10.2	2.16	10.36	12.74	2.54	8.75	11.29	1.01	4.25	5.33

[A] Indicates year where age and growth data was not collected. Age and growth data from the previous year was used to calculate the appropriate value.

Data from 1985 to 2000 is listed in previous years reports.

Kentucky Lake Crappie Database

Table 12. Proportional stock density (PSD) and relative stock density (RSD_{10}) of white and black crappie collected with trap nets (80 net-nights) at Kentucky Lake during October and November 2012. 95% confidence interval is in parentheses.

Location	Species	N	PSD	RSD_{10}
Blood River	White crappie	45	76 (± 7)	33 (± 14)
	Black crappie	304	84 (± 53)	31 (± 5)
Jonathan Creek	White crappie	296	81 (± 5)	33 (± 5)
	Black crappie	393	77 (± 4)	38 (± 5)
Total	White crappie	341	80 (± 4)	33 (± 5)
	Black crappie	697	80 (± 3)	35 (± 4)

wfdtpntk.d12

Table 13. Age frequency and CPUE (fish/nn) of white crappie collected in trap nets fished for 80 net-nights in Kentucky Lake during October and November 2012. Otoliths collected last year where used to determine age frequency estimates.

	Inch class															
Age	2	3	4	5	6	7	8	9	10	11	12	13	Total	%	CPUE	Std err
0	2	12	6	2									22	6	0.27	0.08
1			1	2	14	49	57	74	24	2			223	62	2.80	0.51
2								29	49	18			96	27	1.19	0.23
3										8	6	2	16	4	0.20	0.05
7												1	1	0	0.01	0.01
Total	2	12	7	4	14	49	57	103	73	28	6	3	358		4.48	
%	1	3	2	1	4	14	16	29	20	8	2	1		100		

wfdtpntk.d12, wfdtnagk.d11

Table 14. Age frequency and CPUE (fish/nn) of black crappie collected in trap nets fished for 80 net-nights in Kentucky Lake during October and November 2012. Otoliths collected last year where used to determine age frequency estimates.

	Inch class															
Age	3	4	5	6	7	8	9	10	11	12	13	14	Total	%	CPUE	Std err
0	12	5											17	2	0.21	0.10
1		2	16	48	68	48	8	7					197	28	2.47	0.35
2					8	72	177	60	2	2			321	45	4.01	0.47
3							8	97	39	2			146	20	1.83	0.26
4								15	10	4	1		30	4	0.36	0.06
5											1		1	0	0.02	0.01
6												2	2	0	0.04	0.02
7													0	0		
8											1	1	2	0	0.01	0.00
Total	12	7	16	48	76	120	193	179	51	8	3	3	716		8.95	
%	2	1	2	7	11	17	27	25	7	1	0	0		100		

wfdtpntk.d12, wfdtnagk.d11

Table 15. Lake specific assessment for crappie collected at Kentucky Lake from 2002-2012. This table includes the individual scores for each parameter, as well as the total scores and assessment ratings. The final columns list the instantaneous mortality (Z) and annual mortality (A).

Year	CPUE age-1 and older	CPUE age 1	CPUE Age 0	CPUE >8.0 in	Mean length age-2 at capture	Total score	Assessment rating	Z	A
2002	19.04	13.10	3.77	11.34	10.4			0.673	49
Score	2	2	1	3	4	12	F		
2003	24.08	17.86	15.86	8.75	10.4			0.709	50.8
Score	3	3	2	2	4	14	G		
2004	39.93	24.80	1.63	14.38	9.7			0.649	47.7
Score	4	4	1	4	3	16	G		
2005	26.66	12.86	4.21	16.24	9.7			0.788	54.5
Score	3	2	1	4	3	13	G		
2006	18.69	8.28	2.42	13.46	9.7			0.729	51.7
Score	2	1	1	4	3	11	F		
2007	15.08	8.06	2.36	13.23	10.7			0.872	58.2
Score	2	1	1	3	4	11	F		
2008	15.28	6.31	1.78	13.31	10.7			0.440	35.6
Score	2	1	1	4	4	12	F		
2009	16.23	4.85	3.38	13.58	10.6			0.758	53.1
Score	2	1	1	4	4	12	F		
2010	18.67	13.04	12.84	8.41	10.6			0.556	42.6
Score	2	2	1	2	4	11	F		
2011	18.75	9.01	3.40	12.31	10.0			0.9156	60.0
Score	2	2	1	3	3	11	F		
2012	12.99	5.28	0.48	10.39	10.0			1.0284	64.2
Score	1	1	1	3	3	9	F		
Average	20.49	11.22	4.74	12.31	10.23				51.58

Rating

1 - 7 = Poor (P)
8 - 12 = Fair (F)
13 - 17 = Good (G)
18 - 20 = Excellent (E)

Kentucky Lake Crappie Database

Table 16. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 11.5 hours (23- 30-minute runs) of diurnal electrofishing at Lake Barkley from 9 April to 9 May 2012.

		Inch class																				Std
Area	Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	err
Lower																							
Donaldson Cr.	Smallmouth		1																		1	1.00	1.00
	Spotted	1	1			1		1			1	1									6	6.00	2.00
	Largemouth	2	2	1		1	13	5		2	2	3	1								32	32.00	6.00
Ford's Bay	Smallmouth							1	2		3	1		1	1						9	9.00	5.00
	Spotted		1			2															3	3.00	1.00
	Largemouth					1	1	1	2	3	4	3	2		1						18	18.00	4.00
Kuttawa	Smallmouth		2	1	2			2	2		1	1	1			1					13	6.50	2.22
	Spotted					1	1				3	1	1								7	3.50	3.50
	Largemouth		2	4	9	9	1	8	11	7	11	11	10	6	1			3			93	46.5	5.06
Middle																							
Little River	Largemouth			1	2	1	1	10	18	23	33	56	40	17	10	8	6	4		1	231	115.50	14.29
Eddy Cr.	Smallmouth								1												1	0.40	0.40
	Spotted						1														1	0.40	0.40
	Largemouth	1	6	6	8	2	2	19	34	33	67	62	62	29	19	4	12	4	4		374	149.60	11.34
Upper																							
Nickell Cr.	Smallmouth	1	3	1		1	1	1	1	1	1	1	1		1	2					16	16.00	8.00
	Spotted	1																			1	1.00	1.00
	Largemouth	4	3	2	1	1		1	2	7	3	3	6	4							37	37.00	1.00
Demumbers	Smallmouth	1	3	3		1				2						1					11	11.00	1.00
	Spotted																						
	Largemouth	2	11	5	4			3	2	6	6	5	10	1	1			1			57	57.00	1.00
Willow	Smallmouth	2							1												3	3.00	3.00
	Spotted	1																			1	1.00	1.00
	Largemouth	8	9	6	1	1			1		8	15	5	2	3						59	59.00	3.00
Total	Smallmouth	4	9	5	2	2	1	4	7	3	5	3	2	1	2	4					54	4.70	1.30
	Spotted	3	2			4	2	1			4	2	1								19	1.65	0.70
	Largemouth	17	33	25	25	16	18	47	70	81	134	158	136	59	35	12	18	12	4	1	901	78.35	10.62

(wfdpsdb.d12)

Table 17. Spring diurnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Lake Barkley during late April/early May since 2001.

	Length group											
	<8.0 in		8.0 - 11.9 in		12.0 - 14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err
2001	70.40	8.30	61.20	5.10	31.10	2.50	19.00	1.50	1.60	0.67	181.70	10.80
2002	26.40	3.60	49.70	5.90	40.60	4.10	16.30	1.80	1.33	0.37	133.00	8.50
2003	41.10	5.20	38.50	3.90	75.30	5.30	26.90	2.30	1.68	0.35	181.80	10.40
2004	11.30	1.30	40.90	2.90	29.30	1.60	24.70	2.20	1.80	0.43	106.20	5.10
2005	36.60	4.90	19.30	1.90	59.40	4.80	37.50	3.30	2.00	0.55	152.70	10.30
2006	15.60	2.20	26.70	2.20	51.80	3.90	30.80	2.40	2.10	0.57	124.20	7.40
2007	4.80	0.90	21.36	2.60	66.50	4.70	47.60	4.50	1.80	0.50	140.27	9.73
2008	24.10	3.50	25.80	3.90	32.60	3.90	41.20	4.50	3.00	0.50	123.70	6.30
2009	63.90	7.50	42.53	3.50	38.80	2.70	34.00	3.40	2.40	0.40	179.30	10.20
2010	15.50	1.50	34.30	3.40	28.40	2.40	18.90	1.90	2.20	0.50	97.10	5.37
2012	8.70	1.75	13.13	2.00	32.43	5.43	24.09	5.00	1.48	0.46	78.35	10.62
Average	28.95		33.95		44.20		29.18		1.94		136.21	

(Barkley_LMB_Database.xls)

Data is available since 1985 in previous annual reports

Table 18. PSD and RSD_{15} values calculated for largemouth bass collected during 11.5 hours (23- 30-minutes runs) of spring diurnal electrofishing at each area of Lake Barkley from 9 April to 9 May 2012. 95% confidence intervals are in parentheses.

Area	No. fish ≥8.0 in	PSD (± 95% CI)	RSD_{15} (± 95% CI)
Donaldson	27	30 (17)	4 (7)
Ford's	18	72 (21)	17 (16)
Willow	35	94 (8)	29 (16)
Little River	228	87 (5)	38 (7)
Eddy Creek	353	84 (4)	38 (6)
Kuttawa	78	63 (11)	26 (10)
Nickell	27	85 (13)	37 (19)
Demumbers	35	86 (12)	37 (16)
Total	801	81 (3)	35 (4)

(wfdpsdb.d12)

Table 19. Lake specific assessment for largemouth bass collected at Lake Barkley from 2000 - 2012. This table includes the parameter estimates and the individual score as well as the total score and assessment rating. The final two columns list the instantaneous mortality rate (Z) and the annual mortality (A).

	Mean length		Length group						
	age-3 at	CPUE	12.0 - 14.9 in	≥15.0 in	≥20.0 in	Total	Assessment		
Year	capture	age-1	CPUE	CPUE	CPUE	score	rating	Z	A
2000[A]	12.6	23.16	24.70	27.90	2.70			0.370	31.6
Score	1	2	1	2	3	9	F		
2001	14.7	81.00	31.10	19.00	1.60			0.692	49.9
Score	4	4	2	1	1	12	G		
2002[A]	14.7	28.90	40.60	16.30	1.30			0.693	50.0
Score	4	3	3	1	1	12	G		
2003	12.9	59.20	75.30	26.90	1.70			0.658	48.2
Score	3	4	4	2	1	14	G		
2004[A]	12.9	29.20	29.30	24.70	1.80			0.632	47.0
Score	3	3	2	2	1	11	F		
2005[A]	12.9	42.50	59.40	37.50	2.00			0.674	49.0
Score	3	3	4	4	2	16	G		
2006	13.4	18.40	51.80	30.80	2.00			0.431	40.0
Score	4	1	3	3	2	13	G		
2007[A]	12.7	6.70	66.50	47.60	1.80			0.317	27.0
Score	2	1	4	4	1	12	G		
2008[A]	12.7	28.80	32.60	41.20	3.00			0.339	29.0
Score	2	3	2	4	3	14	G		
2009[A]	12.7	69.16	38.80	34.00	2.40			0.422	34.0
Score	2	4	2	3	3	14	G		
2010[A]	12.7	17.10	28.40	18.90	2.20			0.400	33.0
Score	2	1	1	1	2	7	P		
2011	*	*	*	*	*				
2012	13.0	9.98	32.43	24.09	1.48			0.4308	35.0
Score	3	1	2	2	1	9	F		
Average	13.2	31.85	39.30	26.84	1.84	12		0.505	39.5

Previous years data is listed in previous years reports.
(Barkley LMB Database.xls) * Data not available

[A] age and growth data was not collected. Previous year's data used for age estimates.

Rating
5-7 = Poor (P)
8-11 = Fair (F)
12-16 = Good (G)
17-20 = Excellent (E)

Table 20. Mean back-calculated length (in) at each annulus of largemouth bass including the range in length at each age and the 95% confidence interval of each age group. Otoliths were collected from Lake Barkley in spring 2012.

		Age							
Year class	N	1	2	3	4	5	6	7	8
2011	30	7.0							
2010	29	7.4	9.8						
2009	29	7.6	10.5	12.2					
2008	11	8.5	12.0	13.4	14.6				
2007	9	7.4	11.9	13.7	14.8	16.0			
2006	3	6.1	11.0	14.4	15.5	16.7	17.3		
2004	2	7.7	11.7	14.2	15.7	17.2	18.4	19.3	20.1
Mean		7.4	10.7	12.9	14.9	16.3	17.7	19.3	20.1
Smallest		4.4	8.5	10.1	13.0	14.7	15.9	19.1	20.1
Largest		10.6	13.8	15.5	16.8	18.3	19.3	19.6	20.0
Std. Error		0.1	0.1	0.2	0.2	0.3	0.6	0.2	0.1
Low 95% CI		7.2	10.4	12.5	14.4	15.7	16.5	18.9	20.0
High 95% CI		7.7	10.9	13.2	15.3	16.9	19.0	19.8	20.1

* Intercept = 0.

wfdpsdb.d12, wfdlbagb.d12

Table 21. Age frequency and CPUE (fish/hr) of largemouth bass collected during diurnal electrofishing at Lake Barkley in May 2012.

	Inch class																			
Age	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	%	CPUE	Std err
1	17	33	25	25	13	2												115	13.0	9.98	1.73
2					3	16	47	40										106	12.0	9.24	1.51
3								30	81	110	99	14						334	38.0	28.96	4.75
4										24	59	54	12	12				161	19.0	14.04	2.57
5												68	24	23				115	13.0	9.99	2.03
6													24				4	28	3.0	2.40	0.61
8																	8	8	1.0	0.70	0.24
Total	17	33	25	25	16	18	47	70	81	134	158	136	60	35			12	867		75.31	
%	2	4	3	3	2	2	5	8	9	15	18	16	7	4			1		100		

wfdpsdb.d12, wfdlbagb.d12

Table 22. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 7.5 hours of diurnal electrofishing (13- 30-minute runs) for black bass in each area of Lake Barkley on 15 and 24 October 2012.

	Inch class																							
Area/Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	Std err
Upper																								
Nickell																								
Largemouth bass				8	35	19	9		8	12	12	7	2	9	4	2						127	127.00	5.00
Spotted bass								1														1	1.00	1.00
Smallmouth bass					2		1	1	1								1					6	6.00	6.00
Demumbers																								
Largemouth bass			1	7	20	9	5	1	3	6	3	8	6	4		2	1					76	152.00	0.00
Spotted bass																						0		
Smallmouth bass				1	3	1																5	10.00	0.00
Middle																								
Eddy Creek																								
Largemouth bass	1		1	9	17	26	24	11	9	25	23	32	44	27	11	7	6		1			274	109.60	9.93
Spotted bass								2														2	0.8	0.49
Smallmouth bass				1	2	2		1				2		1								9	3.60	3.60
Lower																								
Little River																								
Largemouth bass				5	22	17	14	9	2	7	5	6	27	23	18	15	8	5	3	1	1	188	75.2	10.09
Spotted bass				1				1														2	0.80	0.80
Smallmouth bass					1	1	2							2		1						7	2.80	1.96
Total																								
Largemouth bass	1		2	29	94	71	52	21	22	50	43	53	79	63	33	26	15	5	4	1	1	665	102.3	8.66
Spotted bass				1				4														5	0.77	0.36
Smallmouth bass				2	8	4	3	2	1			2		3		1	1					27	4.15	1.72

(wfdwrb.d12)

Table 23. Number of fish and the relative weight (W_r) values for each length group of largemouth collected at Lake Barkley during 7.5 hours (13- 30-minute runs) of diurnal electrofishing on 15 and 24 October 2012.

		Length group								
		8.0-11.9 in			12.0-14.9 in			≥15.0 in		
Species	Area	No.	Wr		No.	Wr		No.	Wr	
Largemouth bass	Eddy Creek	68	93	(1)	103	92	(1)	25	94	(3)
	Nickell Branch	32	94	(1)	18	122	(39)	6	91	(5)
	Little River	22	97	(1)	56	96	(2)	51	102	(2)
	Total	135	95	(1)	195	96	(4)	85	98	(1)

		Length group								
		7.0-10.9 in			11.0-13.9 in			≥14.0 in		
Species	Area	No.	Wr		No.	Wr		No.	Wr	
Spotted bass	Eddy Creek	2	93	(5)						
	Nickell Branch	1	91							
	Little River	1	118		1	91				
	Total	4	99	(7)	1	91				
Smallmouth bass	Eddy Creek	1	79		2	80	(3)	1	87	
	Nickell Branch	3	62	(27)				1	82	
	Little River	2	92	(0)				3	89	(2)
	Total	6	75	(13)	2	80	(3)	5	87	(2)

wfdwrb.d12

Table 24. Age-0 CPUE (fish/hr) and mean length (in) of largemouth bass collected in the fall and CPUE of age-1 largemouth bass collected the following spring during diurnal electrofishing at Lake Barkley.

	Age-0[A]		Age-0[A]		Age-0 ≥5.0 in[A]		Age-1[B]	
Year class	Mean length	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err
2001	5.4		21.20	4.00	16.00		32.60	3.40
2002	5.3		26.70	2.40	10.10		59.00	6.40
2003	5.1		35.20	4.40	20.90		29.20	2.40
2004	5.4	0.80	39.80	5.75	30.40	4.27	42.50	5.40
2005	5.4	0.14	5.40	1.20	4.80	1.20	18.43	2.35
2006	4.8	0.15	9.33	1.73	4.00	1.29	6.69	0.68
2007	6.8	0.09	68.68	11.78	59.40	10.70	28.80	3.00
2008	6.2	0.05	55.60	6.74	50.20	6.31	69.16	7.35
2009	5.6	0.06	37.60	4.83	29.20	3.44	17.10	1.84
2010	6.5	0.06	46.00	7.78	42.00	6.93	*	
2011	5.5	0.06	18.60	2.68	13.40	2.37	9.98	1.73
2012	6.1	0.07	40.60	6.87	35.69	5.68		

[A] Data collected by fall (October) diurnal electrofishing. Mean lengths were determined by analysis of otoliths, removed from a subsample of LMB <8.0 in.

[B] Data collected during the following spring (April/May) diurnal electrofishing sample.

* Data not collected in spring of 2011 due to flood conditions.

wfdwrb.dxx, wfdpsdb.dxx

Table 25. Length frequency and CPUE (fish/nn) of each inch class of white and black crappie collected by trap nets (80 net-nights) at Lake Barkley from 30 October-9 November 2012.

		Inch class															Std
Location	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	Total	CPUE	err
Little River																	
	White crappie	8	45	26	7	1	1	20	47	85	45	13	3	1	302	7.55	0.80
	Black crappie		2			1	10	13	23	19	6	1			75	1.93	0.46
Donaldson Creek																	
	White crappie	3	6	1		3	4	9	19	46	24	9		1	125	3.13	0.42
	Black crappie			1	2	4	13	26	47	32	10	2			137	3.45	0.60
Total																	
	White crappie	11	51	27	7	4	5	29	66	131	69	22	3	2	427	5.34	0.51
	Black crappie		2	1	2	5	23	39	70	51	16	3			212	2.69	0.39

(wfdtpntb.d12)

Table 26. Crappie population parameters used to manage the population at Lake Barkley, with values determined from fall trap netting.

	Total CPUE (fish/nn) excluding age-0			CPUE (fish/nn) age-0			Mean length (in) age-2 at capture			CPUE (fish/nn) for crappie ≥8.0 in			CPUE (fish/nn) age-1			CPUE (fish/nn) for crappie ≥10.0 in		
Year	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie
2001	1.14	2.11	3.25	28.43	8.23	36.66	11.3	10.2	10.8	1.08	1.55	2.63	0.69	0.88	1.57	0.94	1.03	1.96
2002	2.73	3.12	5.85	0.91	0.99	1.90	10.4	10.0	10.2	2.56	2.74	5.30	1.49	2.13	3.62	1.10	0.64	1.74
2003	2.94	4.39	7.33	9.89	2.14	12.03	11.1	10.3	10.7	2.26	1.63	3.89	1.84	2.96	4.80	1.09	1.13	2.21
2004 [A]	6.48	2.70	9.18	1.73	1.50	3.23	11.1	10.3	10.7	5.47	1.82	7.29	5.15	1.17	6.32	1.04	0.74	1.78
2005	4.33	2.24	6.57	7.37	1.16	8.53	11.3	10.8	11.1	3.80	1.40	5.20	1.70	1.42	3.12	2.75	0.62	3.37
2006	2.74	4.85	7.59	0.09	0.14	0.23	10.7	10.5	10.6	2.68	0.96	3.64	3.77	2.21	5.98	0.96	0.38	1.34
2007 [A]	2.32	1.46	3.78	1.55	0.44	1.99	10.7	10.5	10.6	1.82	1.44	3.26	0.93	0.68	1.61	1.38	0.49	1.82
2008	1.07	1.73	2.80	3.99	0.86	4.85	11.3	11.3	11.3	1.65	1.08	2.73	0.63	1.36	1.99	0.65	0.36	1.01
2009 [A]	1.33	0.95	2.28	3.79	1.47	5.26	11.3	11.3	11.3	1.65	0.91	2.56	1.06	0.65	1.71	0.67	0.34	1.01
2010	4.09	3.11	7.20	19.22	4.24	23.46	11.6	10.5	11.0	3.10	2.14	5.24	3.53	2.53	6.06	1.34	0.45	1.79
2011 [A]	4.61	2.78	7.39	9.01	1.00	10.01	11.6	10.5	11.1	2.99	0.65	3.64	4.23	2.56	6.79	0.80	0.15	0.95
2012	4.13	2.69	6.82	0.42	0.01	0.43	10.9	10.0	10.5	4.03	2.24	6.27	1.08	0.91	1.99	2.84	0.88	3.72
Average	3.16	2.68	5.84	7.20	1.85	9.05	11.1	10.5	10.8	2.76	1.55	4.30	2.18	1.62	3.80	1.30	0.60	1.89

[A] Indicates year where age and growth data was not collected. Age and growth data from the previous year was used to calculate the appropriate value.
Data from 1985 to 2000 is listed in previous years reports.
Lake Barkley Crappie Database

Table 27. Proportional stock density (PSD) and relative stock density (RSD_{10}) of white and black crappie collected by trap-nets (80 net-nights) at Lake Barkley from 30 October - 9 November 2012. Numbers in parentheses represent 95% confidence intervals.

Location	Species	N	PSD	RSD_{10}
Little River	White crappie	223	96 (3)	66 (6)
	Black crappie	73	85 (8)	36 (11)
Donaldson	White crappie	115	94 (4)	70 (9)
	Black crappie	136	86 (6)	32 (8)
Total	White crappie	338	95 (2)	67 (5)
	Black crappie	209	86 (5)	33 (6)

(wfdtpntb.d12)

Table 28. Mean back-calculated length (in) at each annulus of white crappie including the range in length at each age and the 95% confidence interval of each age group. Otoliths were collected from Lake Barkley in the fall 2012.

		Age								
Year class	N	1	2	3	4	5	6	7	8	9
2011	37	5.2								
2010	62	5.7	8.6							
2009	4	5.0	9.6	11.6						
2008	3	4.2	8.6	11.3	12.4					
2005	1	4.3	6.9	11.2	12.2	13.0	13.4	14.0		
2003	1	4.5	8.5	10.3	11.5	12.2	12.8	13.4	13.7	14.2
Mean		5.4	8.7	11.3	12.2	12.6	13.1	13.7	13.7	14.2
Smallest		3.3	6.7	10.3	11.5	12.2	12.8	13.4	13.7	14.2
Largest		7.8	11.4	11.8	12.9	13.0	13.4	14.0	13.7	14.2
Std Err		0.1	0.1	0.2	0.2	0.4	0.3			
Low 95% CI		5.3	8.4	10.9	11.7	11.8	12.5	13.1		
High 95% CI		5.6	8.9	11.6	12.6	13.4	13.7	14.3		

* Intercept = 0.

wfdtnagb.d12

Table 29. Mean back-calculated length (in) at each annulus of black crappie including the range in length at each age and the 95% confidence interval of each age group. Otoliths were collected from Lake Barkley in the fall 2012.

		Age		
Year class	N	1	2	3
2011	38	4.6		
2010	47	5.5	8.1	
2009	9	5.3	8.5	10.0
Mean		5.1	8.2	10.0
Smallest		3.7	4.8	8.6
Largest		7	11.1	12.3
Std Err		0.1	0.2	0.4
Low 95% CI		4.9	7.9	9.3
High 95% CI		5.3	8.5	10.8

* Intercept = 0.

wfdtnagb.d12

Table 30. Age frequency and CPUE (fish/nn) of black crappie collected during 80 net-nights at Lake Barkley from 30 October - 9 November 2012.

	Inch class											
Age	5	6	7	8	9	10	11	12	Total	Percent	CPUE	Std. err.
0	1								1	1	0.01	0.01
1	1	5	21	29	10	6			72	34	0.91	0.14
2			2	10	60	36	12		120	57	1.49	0.24
3						9	4	3	16	8	0.20	0.04
Total	2	5	23	39	70	51	16	3	209			
%	1	2	11	19	33	24	8	1				

(wfdtpntb.d12) (wfdtnagb.d12)

Table 31. Age frequency and CPUE (fish/nn) of white crappie collected during 80 net-nights at Lake Barkley from 30 October - 9 November 2012.

	Inch class													
Age	4	5	6	7	8	9	10	11	12	13	14	Total	Percent	CPUE	Std err
0	24	6	4									34	9	0.42	0.10
1	3	1		5	26	39	12					86	24	1.08	0.13
2					3	27	119	69	14			232	63	2.89	0.32
3									5	2		7	2	0.08	0.02
4									3	2		5	1	0.06	0.02
7											1	1	0	0.01	0.01
9											1	1	0	0.01	0.01
Total	27	7	4	5	29	66	131	69	22	4	2	366			
%	7	2	1	1	8	18	36	19	6	1	1				

(wfdtpntb.d12) (wfdtnagb.d12)

Table 32. Lake specific assessment for crappie collected at Lake Barkley from 2000 - 2012. This table includes the parameter estimates and the individual scores as well as the total scores and assessment ratings. The final columns list the instantaneous mortality (Z) and annual mortality (A).

Year	CPUE age-1 and older	CPUE age-1	CPUE age-0	CPUE ≥8.0 in	Mean length age-2 at capture	Total score	Assessment rating	Z	A
2000	6.45	5.28	1.34	3.89	10.9			0.94	60.8
Score	2	3	1	3	4	13	G		
2001	3.25	1.57	36.66	2.63	10.4			0.83	56.3
Score	1	1	4	2	2	10	F		
2002	5.85	3.62	1.90	5.30	10.2			1.10	66.7
Score	2	2	2	4	2	12	F		
2003	7.33	4.80	12.03	3.89	10.7			1.23	70.8
Score	3	3	4	3	3	16	G		
2004	9.18	6.32	3.23	7.29	10.7			1.51	77.8
Score	4	4	2	4	3	17	G		
2005	6.50	3.10	8.60	5.20	10.7			1.42	75.8
Score	2	2	4	4	3	15	G		
2006	7.60	6.00	0.20	3.60	10.6			1.49	77.5
Score	3	3	1	2	3	12	F		
2007	3.78	1.80	2.00	3.20	10.6			0.91	59.9
Score	1	2	2	2	3	10	F		
2008	2.80	1.99	4.85	2.73	11.3			0.87	58.0
Score	1	2	3	2	4	12	F		
2009	2.30	1.71	5.26	2.56	11.3			1.33	73.6
Score	1	1	3	2	4	11	F		
2010	7.20	6.29	23.25	5.24	10.9			1.19	69.5
Score	3	4	4	3	4	18	E		
2011	7.39	6.79	10.01	3.64	10.9			1.12	67.5
Score	3	4	4	2	4	17	E		
2012	6.73	1.99	0.43	6.27	10.5			0.286	25.0
Score	2	2	1	4	3	12	F		
Average	5.87	3.94	8.44	4.26	10.7				

Rating

1 - 7 = Poor (P)
8 - 12 = Fair (F)
13 - 17 = Good (G)
18 - 20 = Excellent (E)

(Barkley_Crappie_Database.xls)

Table 33. Fishery statistics derived from a creel survey at Lake Barkley (45,600 a) from 17 February through 13 November 2012.

Fishing Trips			
	No. of fishing trips (per acre)	229,892	(5.0)
Fishing Pressure			
	Total angler-hours (S.E.)	958,964	(34,541)
	Angler-hours/acre	19.3	
Catch / Harvest			
	No. of fish caught (S.E.)	1,510,876	(165,991)
	No. of fish harvested (S.E.)	375,080	(52,944)
	Lb of fish harvested	306,501	
Harvest Rates			
	Fish/hour	0.33	
	Fish/acre	8.23	
	Pounds/acre	6.72	
Catch Rates			
	Fish/hour	1.43	
	Fish/acre	33.13	
Miscellaneous Characteristics (%)			
	Male	88.67	
	Female	11.33	
	Resident	71.69	
	Non-resident	28.31	
Method (%)			
	Still fishing	28.60	
	Casting	67.13	
	Alabama Rig	1.90	
	Trolling	2.35	
	Fly Rod	0.02	
	Crappie Anglers Only		
	Spider Rig	9.82	
	Casting	48.21	
	Still fishing	39.73	
	Trolling	2.23	
Mode (%)			
	Boat	86.79	
	Bank	9.97	
	Dock	3.24	

Table 34. Length distribution for each species of fish harvested or released (lengths of released fish are estimated) at Lake Barkley (45,600 a) from the 17 February to 13 November 2012 creel survey.

		Inch class																								
Species		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
White crappie	H									41,580	36,053	14,474	4,562	2,456	1,140	175										
	R		85	2,039	2,889	8,158	12,746	25,493	87,185	6,713	2,124	765	255	765	340											
Black crappie	H									12,402	11,708	6,151	1,389	695	98											
	R			174	696	4,435	3,391	5,479	17,827	261	174	260														
Largemouth bass	H														13,802	18,603	7,501	5,026	1,875	1,200	525	450	151			
	R							16,832	8,091	37,998	20,444	82,209	105,686	160,950	50,351	50,929	18,493	11,053	5,129	2,384	1,806	722	217	70		
Smallmouth bass	H														143	785	500	428	642	214	71	71				
	R		70			491	491	1,822	701	2,803	841	5,397	4,906	3,574	1,682	1,542	771	631	421	350	140	69				
Spotted bass	H														96											
	R		85			170		682	170	1,193	170	1,790	1,534	1,449	170	85	86									
Bluegill	H	1558	3,289	5,712	17,222	24,838	27,520	13,327	172																	
	R	7933	31,051	57,666	45,467	25,250	7,848	4,265	1,791	1,023																
Redear sunfish	H				190	1,142	190	2,760	3,998	4,759	2,855	2,189	190	97												
	R			3,241	734	1,258	210	629	944	210	105	103														
Longear sunfish	H																									
	R			366																						
Warmouth	H			420	53	104																				
	R		344	275	344	206	344	138																		
Green sunfish	H																									
	R		187																							
Channel catfish	H					674	168	505	168	1,600	337	4,884	2,273	5,726	3,116	2,863	1,516	2,358	1,516	926	337	84	337	421	84	167
	R		218	363	1,235	3,414	799	4,722	872	1,671	363	2,034	654	1,090	1,132	581	436	872	291	436	363		145		73	
Blue catfish	H				332	199	199	465	332	2,128	332	1,396	864	1,995	1,596	1,596	532	1,396	399	598	199	332	266	665	199	399
	R			271	339	1,490	1,423	2,507	948	1,016	271	1,965	271	339	881	135	271	271		339	68	135	68	68		68
Flathead catfish	H													83			83	250	167	83						
	R															64		64	64	191			64			61
White bass	H							926	132	3,702	3,239	5,355	3,834	1,587	859	595										
	R		62	562	1622	2,558	1,934	2,683	1,747	3,868	1,747	4,555	3,556	2,059	562	499	250									
Striped bass	H													1,358							104					
	R			96		289	96	289				868		1,350	193		2,410									
Hybrid striped bass	H							89		89		89	178	354												
	R					163	82	82					163	327	163		82	82	82							80
Yellowbass	H			271	68	678	882	1,153	1,492	1,628																
	R		931	2,251	3,027	15,835	6,443	6,908	2,562	2,406	1,475		78													
Sauger	H													96												
	R									66		66	66	66		66	133	67								
Yellowperch	H																									
	R					92	183			92		91														
Pickerel	H																									
	R																									
Drum	H								55	111				55												
	R			234	78	1,636	623	2,571	234	2,727	545	3,194	701	2,182	1,870	1,870	623	1,169	78	1,948		234	234	234	234	
Skipjack herring	H							64	129			64														
	R					93	463	371	185	185	741															
Bighead Carp	H																									
	R																			149						
Paddlefish	H																									
	R																							40		
Gar	R																			20						

Table 34 (cont). Length distribution for each species of fish harvested or released (lengths of released fish are estimated) at Lake Barkley (45,600 a) from the 17 February to 13 November 2012 creel survey.

Species		Inch class																							Total
		27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	44	45	46	47	48	49	50	
White crappie	H																								100,440
	R																								149,557
Black crappie	H																								32,443
	R																								32,697
Largemouth bass	H																								49,133
	R																								573,364
Smallmouth bass	H																								2,854
	R																								26,702
Spotted bass	H																								96
	R																								7,584
Bluegill	H																								93,638
	R																								182,294
Redear sunfish	H																								18,370
	R																								7,434
Longear sunfish	H																								0
	R																								366
Warmouth	H																								577
	R																								1,651
Green sunfish	H																								0
	R																								187
Channel catfish	H																								30,060
	R	73		73	73				73		70														22,126
Blue catfish	H	133	66	66	66	66	133				71														17,020
	R				203	68			68		68	66													13,617
Flathead catfish	H																								666
	R																								508
White bass	H																								20,229
	R																								28,264
Striped bass	H																								1,462
	R																								5,591
Hybrid striped bass	H																								799
	R																								1,306
Yellowbass	H																								6,172
	R																								41,916
Sauger	H																								96
	R																								530
Yellowperch	H																								0
	R																								458
Pickerel	H																								0
	R																								0
Drum	H	78		78					78																455
	R	109	109	55	111																				23,603
Skipjack herring	H																								257
	R																								2038
Bighead Carp	H																								0
	R				73																				2,111
Paddlefish	H																								0
	R																								40
Gar	R				91						91				90									54	346

Table 35. Fish harvest statistics derived from a creel survey at Lake Barkley (45,600 a) from 17 February to 13 November 2012.

	Black bass group	Largemouth bass	Smallmouth bass	Spotted bass	**Crappie group**	White crappie	Black crappie	**Catfish group**	Channel catfish	Flathead catfish	Blue catfish	Bullhead	**Panfish group**	Bluegill	Redear sunfish	Longear sunfish	Warmouth	Green sunfish
No. caught	**659,735**	622,497	29,556	7,680	**315,140**	249,998	65,141	**85,119**	52,216	1,174	30,638	1,090	**314,638**	275,933	25,663	366	2,229	187
(per acre)	**(14.47)**	(13.65)	(0.65)	(0.17)	**(6.90)**	(5.50)	(1.43)	**(1.87)**	(1.15)	(0.03)	(0.67)	(0.02)	**(6.90)**	(6.05)	(0.56)	(0.01)	(0.05)	(0.00)
No. harvested	**52,084**	49,133	2,854	96	**132,884**	100,440	32,444	**48,286**	30,061	666	17,020	538	**112,586**	93,638	18,370		578	
(per acre)	**(1.14)**	(1.08)	(0.06)	(0.00)	**(2.90)**	(2.20)	(0.71)	**(1.06)**	(0.66)	(0.01)	(0.37)	(0.01)	**(2.47)**	(2.05)	(0.40)		(0.01)	
%of total no. harvested	**13.88**	13.10	0.76	0.03	**35.42**	26.78	8.64	**12.87**	8.01	0.18	4.54	0.14	**30.00**	24.96	4.90		0.01	
Lb. harvested	**119,468**	111,937	7,398	132	**85,088**	61,820	23,267	**56,616**	31,404	1,485	23,440	286	**26,451**	15,272	11,131		0	
(per acre)	**(2.61)**	(2.45)	(0.16)	(0.00)	**(1.87)**	(2.20)	(0.51)	**(1.24)**	(0.69)	(0.03)	(0.51)	(0.01)	**(0.58)**	(0.33)	(0.24)		(0.00)	
%of total lb. harvested	**38.98**	36.52	2.41	0.04	**27.76**	20.17	7.59	**18.47**	10.25	0.48	7.65	0.09	**8.63**	4.98	3.63		0.15	
Mean length (in)		16.5	17.5	15.0		11.2	11.0		14.5	17.7	16.1	10.8		5.9	9.4		5.0	
Mean weight (lb)		2.34	2.55	1.37		0.67	0.74		1.00	2.20	1.55	0.53		0.14	0.57		0.09	
No. of fishing trips for that species	**114,356**				**39,917**			**19,194**					**18,890**					
%of all trips	**49.7**				**17.4**			**8.4**					**8.2**					
Hours fished for that species	**477,023**				**166,510**			**80,068**					**78,795**					
(per acre)	**(10.46)**				**(3.65)**			**(1.76)**					**(1.73)**					
No. harvested fishing for that species	**49,658**				**124,233**			**36,205**					**79,603**					
Lb harvested fishing for that species	**113,858**				**79,626**			**43,368**					**19,283**					
No./hour harvested fishing for that species	**0.08**				**0.70**			**0.44**					**1.27**					
%success fishing for that species	**15.7**				**53.4**			**50.8**					**54.3**					

t = <0.005

Table 35 (cont.). Fish harvest statistics derived from a creel survey at Lake Barkley (45,600 a) from 17 February to 13 November 2012.

	Sauger	Yellow perch	**Morone Group**	White bass	Striped bass	Yellow bass	Hybrid striped bass	Drum	Skipjack herring	Gar	Bowfin	Buffalo	Sucker	Illegal bass	Illegal Bl. crappie	Illegal Wh. crappie	**Anything**
No. caught	**626**	458	**105,742**	48,494	7,054	48,089	2,106	23,673	2,296	364		263	254				
(per acre)	**(0.03)**	(0.09)	**(2.65)**	(0.45)	(0.03)	(2.15)	(0.02)	(0.43)	(0.12)	(0.01)		t	t				
No. harvested	**71**	1,880	**38,139**	12,763	238	25,139		544	38								
(per acre)	t	(0.04)	**(0.75)**	(0.25)	t	(0.49)		(0.01)	t								
%of total no. harvested	**0.01**	0.31	**6.26**	2.09	0.04	4.12		0.09	0.01								
Lb. harvested	**129**	535	**15,764**	8,801	1,054	5,910		411	16								
(per acre)	**t**	(0.01)	**(0.31)**	(0.17)	(0.02)	(0.12)		(0.01)	t								
%of total lb. harvested	0.03	0.14	**4.09**	2.28	0.27	1.53		0.11	0.00								
Mean length (in)	**18.0**	8.8		11.6	22.7	8.4		13.5	12.0								
Mean weight (lb)	**1.83**	0.32		0.70	5.29	0.23		1.75	0.43								
No. of fishing trips for that species			**4,117**														**31,725**
%of all trips			**1.8**														**13.8**
Hours fished for that species			**17,711**														**#####**
(per acre)			**(0.35)**														**(2.90)**
No. harvested fishing for that species			**18,804**														
Lb harvested fishing for that species			**9,922**														
No./hour harvested fishing for that species			**1.35**														
%success fishing for that species			**54.5**														

t = <0.005

Table 36. Monthly crappie angling success at Lake Barkley during 17 February to 13 November 2012 creel survey.

Month	Total no. of crappie caught	Total no. of crappie harvested	No. of crappie fishing trips	Hours fished by crappie anglers	Crappie caught by crappie anglers	Crappie caught/ hour by crappie anglers	Crappie harvested by crappie anglers	Crappie harvested/ hour by crappie anglers
Feb	31,335	9,319	3,037	12,669	31,130	2.44	9,319	0.73
Mar	63,417	19,632	9,594	40,022	62,405	1.51	19,430	0.47
Apr	89,975	30,312	10,112	42,181	84,008	1.87	28,772	0.64
May	23,911	8,078	3,017	12,584	13,787	1.51	3,016	0.33
Jun	5,815	921	419	1,748	4,326	2.81	780	0.51
Jul	80		26	110	40	0.33		
Aug	803	281	259	1,082	682	0.56	241	0.20
Sept	3,751	2,098	1,676	6,990	3,497	0.64	2,034	0.38
Oct	23,983	13,517	5,008	20,888	23,045	1.35	13,001	0.76
Nov	72,070	48,725	6,769	28,237	70,577	2.79	47,640	1.88
Total	315,140	132,884	39,917	166,511	293,497		124,233	
Mean						1.70		0.70

Table 37. Crappie catch and harvest statistics derived from the 17 February to 13 November 2012 creel survey at Lake Barkley (45,6 00 a).

	White crappie				Black crappie				Blacknose crappie			
	Harvested	Released		Total	Harvested	Released		Total	Harvested	Released		Total
	≥ 10.0 in	< 10.0 in	≥ 10.0 in		≥ 10.0 in	< 10.0 in	≥ 10.0 in		≥ 10.0 in	< 10.0 in	≥ 10.0 in	
Total no. of crappie	100,441	138,595	10,962	249,999	32,444	32,002	695	65,151				
% of crappie harvested by number	75.6				24.4							
Total weight of crappie (lb)	61,821	36,016	2,848	100,684	23,267	8,754	190	32,211				
% of crappie harvested by weight	72.7				27.3							
Mean length (in)	11.2				11.0							
Mean weight (lb)	0.67				0.74							
Rate (f/h)	0.08				0.02							

Table 38. Monthly black bass angling success at Lake Barkley during 17 February to 13 November 2012 creel survey.

Month	Total no. of bass caught	Total no. of bass harvested	No. of black bass fishing trips	Hours fished by bass anglers	Bass caught by bass anglers	Bass caught/ hour by bass anglers	Bass harvested by bass anglers	Bass harvested/ hour by bass anglers
Feb	4,096		1,543	6,435	3,277	0.49		
Mar	37,240	2,024	7,824	32,636	31,709	0.90	1,822	0.05
Apr	169,461	6,544	19,800	82,591	159,355	1.56	6,158	0.06
May	133,342	16,695	21,204	88,451	126,556	1.18	16,156	0.15
Jun	116,368	11,204	18,546	77,361	112,327	1.27	10,637	0.12
Jul	30,096	1,710	5,839	24,355	27,950	1.00	1,631	0.06
Aug	28,144	2,610	8,200	34,207	27,060	0.67	2,449	0.06
Sept	71,340	5,659	13,615	56,795	68,097	0.97	5,532	0.08
Oct	55,805	3,332	13,889	57,935	52,519	0.74	3,238	0.05
Nov	13,844	2,307	3,897	16,258	12,078	0.65	2,035	0.11
Total	659,736	44,552	114,356	477,023	620,928		49,658	
Mean						1.03		0.08

Table 39. Black bass catch and harvest statistics derived from the 17 February to 13 November 2012 creel survey at Lake Barkley (45,600 a).

	Largemouth bass				Smallmouth bass				Spotted bass			
	Harvest	Release		Total	Harvest	Release		Total	Harvest	Release		Total
	≥15.0 in	12.0-14.9 in	≥15.0 in		≥15.0 in	12.0-14.9 in	≥15.0 in			12.0-14.9 in	≥15.0 in	
Total no. of bass	49,133	348,845	141,155	622,498	2,855	13,877	5,606	29,557	96	4,773	242	7,680
% of bass harvested by number	94.3				5.5				0.2			
Total weight of bass (lb)	111,938	439,282	177,751	833,947	7,399	13,181	5,326	32,763	132	3,394	242	5,525
% of bass harvested by weight	93.7				6.8				0.1			
Mean length (in)	16.5				17.3				15.0			
Mean weight (lb)	2.34				2.50				1.37			
Rate (f/h)	0.048				0.003				0.000			

Table 40. Panfish catch and harvest statistics derived from the 17 February to 13 November 2012 creel survey at Lake Barkley (45,600 a).

	Bluegill				Redear sunfish			
	Harvested	Released		Total	Harvested	Released		Total
		6.0 - 7.9 in	≥ 8.0 in			6.0 - 7.9 in	≥ 8.0 in	
Total no. of panfish	93,638	33,098	7,080	275,933	18,370	1,468	1,992	35,357
% of panfish harvested by number	83.2				16.3			
Total weight of panfish (lb)	15,272	2,104	450	26,861	11,131	121	164	12,530
% of panfish harvested by weight	57.7				42.1			
Mean length (in)	5.9				9.4			
Mean weight (lb)	0.14				0.57			
Rate (f/h)	0.08				0.01			

Table 41. Monthly panfish angling success at Lake Barkley during 17 February to 13 November 2012 creel survey.

Month	Total no. of panfish caught	Total no. of panfish harvested	No. of panfish fishing trips	Hours fished by panfish anglers	Panfish caught by panfish anglers	Panfish caught/ hour by panfish anglers	Panfish harvested by panfish anglers	Panfish harvested/ hour by panfish anglers
Feb	102	102	48	201				
Mar	12211	3,441	494	2,061	3,441	2.02	1,080	0.63
Apr	70,248	23,384	5,516	23,008	30,793	2.07	12,414	0.83
May	167,485	66,025	8,102	33,798	136,250	4.81	54,285	1.92
Jun	23,047	5,389	1,519	6,337	7,304	1.48	1,347	0.27
Jul	9,184	4,254	343	1,433	5,685	4.80	2,743	2.32
Aug	6,303	2,288	486	2,028	3,171	3.13	1,686	1.67
Sept	11,636	1,971	1,152	4,806	6,804	2.09	1,590	0.49
Oct	11,030	4,646	1,228	5,124	8,588	2.10	4,458	1.09
Nov	3,393	1,086						
Total	314,639	112,587	18,890	78,795	202,036		79,603	
Mean						3.18		1.27

Table 42. Catfish catch and harvest statistics derived from the 17 February to 13 November 2012 creel survey at Lake Barkley (45,600 a).

	Channel catfish				Blue catfish			
	Harvested	Released		Total	Harvested	Released		Total
		8.0-11.9 in	≥ 12.0 in			8.0-11.9 in	≥ 12.0 in	
Total no. of catfish	30,061	7,628	8,499	52,217	17,021	4,742	5,352	30,638
% of catfish harvested by number	62.3				35.2			
Total weight of catfish (lb)	31,404	3,299	3,677	40,988	23,440	3,389	3,823	33,170
% of catfish harvested by weight	55.5				41.4			
Mean length (in)	14.5				16.1			
Mean weight (lb)	1.00				1.55			
Rate (f/h)	0.00				0.02			

Table 43. Monthly catfish angling success at Lake Barkley during 17 February to 13 November 2012 creel survey.

Month	Total no. of catfish caught	Total no. of catfish harvested	Hours fished by catfish anglers	No. of catfish fishing trips	Catfish caught by catfish anglers	Catfish caught/ hour by catfish anglers	Catfish harvested by catfish anglers	Catfish harvested/ hour by catfish anglers
Feb	4,915	1,638	1,207	289	4,301	2.92	1,229	0.83
Mar	3,643	1,754	3,607	865	2,159	0.54	1,214	0.30
Apr	6,351	3,945	4,720	1,131	1,539	0.36	1,443	0.34
May	21,757	14,325	17,978	4,310	11,524	0.71	10,016	0.62
Jun	22,267	12,126	21,198	5,082	17,019	0.73	9,999	0.43
Jul	3,499	1,908	6,943	1,664	1,710	0.30	1,312	0.23
Aug	4,978	1,967	6,896	1,653	4,175	0.75	1,686	0.30
Sept	10,936	6,295	12,888	3,090	8,902	0.92	5,532	0.57
Oct	2,159	798	3,350	803	846	0.40	517	0.24
Nov	4,615	3,529	1,284	308	3,528	2.40	3,257	2.18
Total	85,120	48,286	80,069	19,195	55,703		36,205	
Mean						0.71		0.44

Table 44. Morone catch and harvest statistics derived from the 17 February to 13 November 2012 creel survey at Lake Barkley (45,600 a).

	White bass				Yellow bass				Striped bass			
	Harvest	Release		Total	Harvest	Release		Total	Harvest	Release		Total
		8.0-14.9 in	≥15.0 in			8.0-14.9 in	≥15.0 in			8.0-14.9 in	≥15.0 in	
Total no. of Morone	20,229	20,215	1,312	48,494	6,172	13,429		48,089	1,462	2,507	2,603	7,054
% of Morone harvested by number	70.6				21.5				5.1			
Total weight of Morone (lb)	14,526	9,710	629	28,102	1,371	1,650		6,522	1,881	3,010	3125	8,596
% of Morone harvested by weight	78.2				7.3				10.1			
Mean length (in)	11.7				8.2				16.3			
Mean weight (lb)	0.70				0.22				1.97			
Rate (f/hr)	0.020				0.007				0.001			

Table 45. Monthly *Morone* angling success at Lake Barkley during 17 February to 13 November 2012 creel survey.

Month	Total no. of *Morone* caught	Total no. of *Morone* harvested	No. of *Morone* fishing trips	Hours fished by *Morone* anglers	*Morones* caught by *Morone* anglers	*Morones* caught/ hour by *Morone* anglers	*Morones* harvested by *Morone* anglers	*Morones* harvested/ hour by *Morone* anglers
Feb	922	102						
Mar	5,735	1,687	82	344	270	10.00	270	10.00
Apr	14,435	1,540	71	295	1,828	4.75		
May	19,387	9,694	1,293	5,393	6,462	2.18	6,462	2.18
Jun	16,381	6,169	1,729	7,212	7,659	1.64	5,957	1.28
Jul	7,832	2,902	845	3,527	5,924	2.07	2,862	1.00
Aug	5,942	2,851	778	3,245	4,416	2.19	2,609	1.29
Sept	7,121	2,289	628	2,621	4,451	2.03	2,289	1.05
Oct	12,109	751	189	788	657	2.33	141	0.50
Nov	15,880	679						
Total	105,743	28,663	5,615	23,425	31,667		20,590	
Mean						1.99		1.20

Table 46. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during diurnal electrofishing at Lake Beshear during 2012.

		Inch class																					
Season	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	Std err
Spring	Largemouth bass	3	20	29	13	21	34	32	16	2	6	8	8	12	22	15	23	12	6	4	1	287	114.80	6.95
Fall	Largemouth bass			21	54	13	9	12	16	17	11	12	11	6	9	5	5	4	1			206	82.40	15.12

w fdpsdlb.d12 and w fdw rlb.d12

Table 47 Lake specific assessment for largemouth bass collected at Lake Beshear from 2003 - 2012. This table includes the parameter estimates and the individual score as well as the total score and assessment rating. The final two columns list the instantaneous mortality (Z) and annual mortality (A).

Year	Mean length age-3 at capture	CPUE age-1	Length group 12.0 - 14.9 in CPUE	Length group ≥15.0 in CPUE	Length group ≥20.0 in CPUE	Total score	Assessment rating	Z	A
2003[A]	14.1	6.40	8.00	25.60	2.00			0.430	34.9
Score	4	1	1	2	1	9	F		
2004[A]	14.1	6.40	9.60	42.40	2.80			0.547	54.7
Score	4	1	1	4	2	12	G		
2005	13.8	38.80	7.20	44.40	3.60			0.430	34.9
Score	4	4	1	4	2	15	G		
2006	13.8	24.80	7.20	34.00	4.80			0.262	23.0
Score	4	3	1	3	3	14	G		
2007[A]	13.8	25.00	15.00	35.33	4.67			0.344	29.1
Score	4	3	2	3	3	15	G		
2008[A]	13.8	10.40	11.20	20.80	3.60			0.316	27.1
Score	4	2	2	2	2	12	G		
2009[A]	13.8	5.20	6.00	29.60	4.40			0.142	13.2
Score	4	1	1	3	3	12	G		
2010[A]	13.8	22.33	11.33	39.67	3.67			0.297	25.7
Score	4	3	2	3	2	14	G		
2011	13.3	11.67	17.50	47.50	5.50			0.194	17.6
Score	3	2	3	4	3	15	G		
2012[A]	13.3	27.60	8.80	38.00	4.40			0.291	25.2
Score	3	4	1	3	3	14	G		
Average	13.8	17.9	10.2	35.7	3.9				28.5

Data from 1985 to 2002 is listed in previous years reports.

[A] age and grow th data w as not collected. Previous year's data used for age estimates.

Rating
1-7 = Poor (P)
8-11 = Fair (F)
12-16 = Good (G)
17-20 = Excellent (E)

Lake Beshear Bass Data Base

Table 48. Age-0 CPUE (fish/hr) and mean length (in) of largemouth bass collected in the fall, and CPUE of age-1 largemouth bass collected the following spring during diurnal electrofishing at Lake Beshear.

	Age 0[A]		Age 0[A]		Age 0 ≥5.0 in[A]		Age 1[B]	
Year class	Mean length	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err
2001	4.5	0.2	4.40	1.60	0.80	0.49	15.00	2.94
2002	4.2	0.2	5.00	1.29	0.00		13.50	1.33
2003	3.3	0.1	24.00	4.76	0.50	0.50	4.32	1.94
2004	3.8	0.1	17.60	4.12	0.00		38.80	1.80
2005	4.4	0.1	21.00	7.68	0.00		37.04	9.50
2006	4.2	0.1	23.00	7.51	3.00	1.91	25.00	4.24
2007	4.8	0.1	21.60	3.49	9.60	2.32	10.00	1.42
2008	4.3	0.1	12.40	1.17	2.00	0.89	4.80	1.59
2009	3.6	0.1	24.80	5.31	2.00	0.63	22.33	4.90
2010	4.9	0.1	54.00	4.60	22.00	4.52	11.67	2.19
2011	5.0	0.1	41.60	14.77	23.60	7.63	27.60	5.45
2012	6.3	0.1	34.00	8.76	33.20	7.40		

[A] Data collected by fall (October) diurnal electrofishing. Mean lengths were determined by analysis of otoliths, removed from a subsample of LMB <8.0 in, which were extrapolated to the entire catch of the fall sample, and length frequencies.

[B] Data collected during the following spring (April/May) diurnal electrofishing sample.

WFDWRLB.Dxx, WFDWRAGB.Dxx, WFDPSDLB.Dxx

Table 49. Relative abundance of catfish collected at Lake Beshear using multiple sampling methods during May of 2012. Low pulse (15 PPS) electrofishing was conducted for 1 hour. Five 100-hook trot lines were fished for three nights. Three sets of trandem hoop nets were fished for three nights.

		Inch class																
Method	Species	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total	CPUE
Hoop nets																		
	Channel catfish	1		6	21	83	84	45	24	11	2	3	2		1		283	94.33
	Blue catfish					1	1	1		1							4	1.33
Trot lines																		
	Channel catfish				1	20	31	12	8	3	1	1					77	5.13
	Blue catfish			4	15	21	40	34	20	5	4	2	1		1	1	148	9.87
Electrofishing																		
	Channel catfish																	
	Blue catfish						3	2									5	5.00
Total																		
	Channel catfish	1		6	22	103	115	57	32	14	3	4	2		1		360	
	Blue catfish			4	15	22	44	37	20	6	4	2	1		1	1	157	

wfdhcclb.d12 and wfdlcclb.d12

Table 50. Number of catfish and relative weight (Wr) for each length group of catfish collected at Lake Beshear during May 2012. Standard errors are in parentheses.

		Length group								
		11.0-16.0 in			16.0-24.0 in			All sizes		
Species	Method	No.	Wr		No.	Wr		No.	Wr	
Channel catfish	Hoop nets	193	88	(1)	88	94	(2)	281	90	(1)
	Trot lines	52	85	(2)	24	90	(3)	76	86	(2)
	Total	245	87	(1)	112	93	(1)	357	89	(1)

		Length group								
		12.0-20.0 in			20.0-30.0 in			All sizes		
Species	Method	No.	Wr		No.	Wr		No.	Wr	
Blue catfish	Hoop nets	4	91	(3)				4	91	(3)
	Trot lines	143	85	(1)	5	87	(1)	148	85	(1)
	Total	147	85	(1)	5	87	(1)	152	85	(1)

w fdhcclb.d12 and w fdlcclb.d12

Table 51. Size range of each year class of blue catfish collected during sampling at Lake Beshear in May 2012. Sampling consisted of low pulse electrofishing, trotlines and hoop nets. Ranges in length were determined from fish aged by otoliths.

Year class	Year stocked	Age	N	Size range (in.)
2004	2005	8	11	16.1 -24.6
2006	2007	6	12	15.1 - 20.8
2008	2009	4	23	12.4 - 19.0

w fdlbcag.d12

Table 52. Mean back-calculated length (in) at each annulus for blue catfish collected from Lake Beshear. Otoliths were collected from Lake Beshear during May 2012. Back-calculated length estimates should be used with caution.

		Age							
Year class	N	1	2	3	4	5	6	7	8
2008	23	5.3	9.0	11..6	14.1				
2006	12	4.8	8.8	10.9	12.9	14.9	16.9		
2004	11	4.4	8.0	10.5	12.4	14.0	15.7	17.5	19.2
Mean		5.0	8.7	11.1	13.4	14.5	16.4	17.5	19.2
Smallest		3.6	5.6	8.2	9.1	11.4	12.7	14.3	15.8
Largest		7.2	11.6	14.9	18.0	18.3	20.8	22.0	24.6
Std Err		0.1	0.2	0.2	0.3	0.3	0.4	0.7	0.8
Low 95% CI		4.7	8.4	10.8	12.9	13.8	15.5	16.0	17.6
High 95% CI		5.2	9.0	11.5	13.9	15.1	17.2	18.9	20.9

* Intercept = 0.

w fdlbcag.d12

Table 53. Age frequency of blue catfish collected at Lake Beshear from May 29 - June 1, 2012 using multiple sampling methods. No CPUE was calculated since multiple sample methods were used.

	Inch class														
Age	12	13	14	15	16	17	18	19	20	21	22	23	24	Total	Percent
4	4	15	22	9		7								57	38.0
6				35	19	10	1	1	2					68	43.0
8					18	3	5	3					1	30	19.0
Total	4	15	22	44	37	20	6	4	2				1	155	100
%	3	10	15	27	23	13	4	3	1				1	100	

w fdhcclb.d12, w fdlcclb.d12 and w fdlbcag.d12

Table 54. Mean back-calculated length (in) at each annulus for channel catfish collected from Lake Beshear. Otoliths were collected from Lake Beshear during May 2012. This back-calculated lengths should be used with uncertainties.

		Age														
Year class	N	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2011	2	9.9														
2008	10	5.7	8.9	11.5	13.6											
2007	16	5.5	8.5	10.7	12.6	14.7										
2006	5	4.6	8.0	10.1	11.9	13.9	15.8									
2005	10	5.5	8.4	10.3	12.2	13.6	15.3	16.9								
2004	23	4.9	7.6	9.7	11.1	12.9	14.6	16.2	17.7							
2003	6	5.2	7.1	8.5	10.3	11.7	13.2	14.7	15.8	17.0						
2002	1	4.3	6.5	7.8	9.1	10.2	11.1	12.4	13.4	14.5	15.4					
2001	1	3.3	5.3	7.2	8.2	9.3	10.3	11.1	12.1	12.7	13.6	14.4				
2000	1	3.8	5.7	6.8	8.0	8.9	9.5	10.2	10.8	11.4	11.9	12.5	13.6			
1999	1	3.9	4.8	5.8	7.1	8.5	9.7	10.4	11.4	11.6	12.4	13.1	14.5	15.1	15.8	16.8
Mean		5.4	8.1	10.1	12.0	13.4	14.2	15.3	15.2	15.2	13.3	13.3	14.1	15.1	15.8	16.8
Smallest		2.7	4.8	5.8	7.1	8.5	9.5	10.3	10.8	11.4	11.9	12.5	13.6			
Largest		10.7	11.4	13.1	15.2	17.5	17.4	19.9	19.7	19.7	15.4	14.4	14.5			
Std Err		0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.7	0.9	0.8	0.6	0.4			
Low 95% CI		5.0	7.7	9.7	11.5	12.7	13.3	14.2	13.8	13.5	11.8	12.3	13.2			
High 95% CI		5.8	8.4	10.5	12.4	14.0	15.0	16.3	16.7	16.9	14.8	14.4	14.9			

* Intercept = 0.

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Table 55. Size range of each year class of channel catfish collected during sampling at Lake Beshear in May 2012. Sampling consisted of low pulse electrofishing, trotlines and hoop nets. Ranges in length were determined from fish aged by otoliths.

Year class	Year stocked	Age	N	Size range (in.)
1997	no stocking	15	1	19.3
2000	2001	12	1	14.4
2001	no stocking	11	1	14.8
2002	2003	10	1	16.7
2003	2004	9	6	14.4 - 21.1
2004	2005	8	4	16.5 - 21.1
2005	2006	7	10	12.8 - 21.0
2006	2007	6	5	13.6 - 19.0
2007	2008	5	16	13.2 - 20.6
2008	no stocking	4	10	13.5 - 17.6
2011	no stocking	1	2	11.8 - 12.0

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Table 56. Age frequency of channel catfish collected at Lake Beshear from May 29 - June 1, 2012 using multiple sampling methods.

	Inch class											
Age	12	13	14	15	16	17	18	19	20	21	Total	Percent
1	3										3	0.8
4		11	17	63		3					94	26.4
5		7	17	52	24	7	2		2		111	31.2
6		4	17		13	4	2	1			41	11.5
7	3				6	11	4	1	2	1	28	7.9
8					6		2	1		1	10	2.8
9			17			7	4			1	29	8.1
10					6						6	1.7
11				1							1	0.3
12			17								17	4.8
15			17								17	4.8
Total	6	22	102	116	57	32	14	3	4	2	356	100
%	2	6	29	32	16	9	4	1	1	1		

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NORTHWESTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Table 1 presents a summary of conditions encountered while sampling at state-owned lakes and ACOE reservoirs during the 2012 field season.

Nolin River Lake

Black Bass Sampling

Spring electrofishing to monitor the black bass population at Nolin River Lake was conducted during April 2012 (Tables 2-7). Black bass have not been sampled in the spring at Nolin since 2009 due to high water level throughout the sampling time frame. With the exception of the ≥ 20.0-in length group, the CPUE of all other length groups increased significantly compared to 2009 and previous samples. Surveys conducted prior to 2009 indicated an increasing catch rate for all length groups except the ≥ 20.0-in length group and this trend appears be continuing. Length at age data is similar to when last collected in 2006.

Fall electrofishing to determine condition and CPUE and mean length of age 0 largemouth bass (Tables 8-10) was conducted in October 2012. Condition factors are good and similar to previous collections. The length-weight equation is log W = -3.54 + 3.18 (log L). Mean length and CPUE of age 0 fish is similar to those collected since 2010. CPUE of age 1 fish is significantly greater that previous samples and probably due to the extremely high and stable water level throughout the spawning timeframe in 2011. The Nolin Lake Strategic Management Plan (SMP) objectives for largemouth bass state: a mean length at age 3 of ≥12.5 in, a CPUE of ≥30.00 fish/hr for age 1 fish, a CPUE of ≥25.50 fish/hr for 12.0-14.9 in fish, a CPUE of ≥12.50 fish/hr for ≥15.0 in fish, and a CPUE of ≥1.00 fish/hr for ≥20.0 in fish. The only objective not met in 2012 was the CPUE of >20.0 in fish.

Crappie Sampling

Trap netting was conducted in October to assess Nolin River Lake's crappie population (Tables 11-15). A total of 1,045 crappie (4.9 % black) were collected in 127 net-nights. Catch rates are similar to those collected over the last several years. The growth rate is good with crappie reaching 10.1 in at age 2 + at capture. The length-weight equation is log W = -3.65 + 3.39 (log L). The growth rate objective of a mean length at age 2+ at capture of ≥ 9.6 in was the only crappie management plan objective met in 2012.

Rough River Lake

Black Bass Sampling

Spring electrofishing to assess the black bass population at Rough River Lake was conducted during April 2012 (Tables 16-19). Rough River Lake has not been sampled in the spring since 2009 because of high water levels throughout the sampling timeframe. The catch rates for largemouth bass ≥ 15.0 and ≥ 20.0 in are higher than any previously collected, but catch rates for largemouth ≤ 15.0 in have been similar to past years.

Fall sampling for length-weight data and mean length and CPUE of age 0 fish was conducted in October (Tables 20-22). Length-weight data is good and similar to past collections. The log 10 length weight equation is log W = -3.66 + 3.29 (log L). The mean length of age 0 fish is higher than previously recorded while the CPUE of age 0 fish is the lowest ever recorded. Rough River Lake SMP objectives for largemouth bass management state: a mean length age 3 fish at capture of ≥12.5 in, a spring CPUE of age 1 fish ≥30.00 fish/hr, a spring CPUE of ≥25.50 fish/hr for 12.0-14.9 in fish, a spring CPUE of ≥12.20 fish/hr for ≥15.0 in fish, and a spring CPUE of ≥0.50 fish/hr for fish ≥20.0 in. All management objectives for largemouth bass were met in 2012.

Crappie Sampling

Trap netting to evaluate Rough River Lake's crappie population was conducted the second week of November (Tables 23-24). Due to repair work on the dam's stilling basin, the annual fall drawdown which normally begins October 15th did not begin until the last week of December. During the normal trap netting timeframe of late October to early November the lake is 2-4 feet below summer pool and falling 6-8 inches a day. The lake remaining at summer pool with a stable water level during the 2012 trap netting period negatively impacted catch rate. The limited data presented here is simply a record of what was captured but should not be used for any comparative purposes.

Hybrid Striped Bass Sampling

Gill netting to assess hybrid striped bass population parameters was conducted the first week of November (Tables 25-29). Catch rates in 2012 were less than when last sampled in 2010, but are more in line with previous collections. Growth rate and age and length distributions were also similar to prior collections. This is a very stable population with good growth rates. The log 10 length weight equation is log W = -3.58 + 3.17 (log L). Rough River Lake SMP management objectives state: a mean length at capture of ≥ 16.5 in for age 2+ fish, a CPUE (excluding age 0 fish) of ≥ 25.00 fish/nn, a CPUE of ≥ 15.00 fish/nn for ≥ 15.0 in fish, and a CPUE of ≥ 8.00 fish/nn for age 1 fish. All hybrid striped bass management objectives were met in 2012.

Lake Malone

Largemouth Bass Sampling

Electrofishing data for the largemouth bass population assessment was collected in April 2012 (Tables 30-33). The catch rate of 8.0-11.9-in largemouth bass increased markedly in 2012. The catch rate of largemouth bass ≥ 20.0 in decreased again in 2012 as it has over the last 10 years. Catch rates for 12.0-14.9-in bass and ≥ 15.0-in bass remain similar to prior collections. The spike in the catch rate of bass < 12.0 in is cause for concern since this size group has a tendency to be over-abundant at Lake Malone. Length at age data collected in 2010 indicate growth rate has slowed compared to the early 2000's. Largemouth bass < 12.0 in are not protected, but past creel surveys indicate anglers harvest very few on them.

Lake Malone was again electrofished in October for relative weight and mean length and CPUE of age 0 fish (Tables 34-36). The relative weight for largemouth < 12.0 in is less than desirable.

Lake Malone SMP objectives for management of largemouth bass state: a mean length ≥ 12.0 in at age 3 at capture, a CPUE ≥ 20.00 fish/hr for age 1 fish, a CPUE ≥ 35.00 fish/hr for 12.0-14.9 in fish, a CPUE ≥ 40.00 fish/hr for ≥ 15.0 in fish, and a CPUE ≥ 6.00 fish/hr for ≥ 20.0 in fish. The catch rate objective for ≥ 20.0 in bass was not met in 2012.

Bluegill/Redear Sunfish Sampling

Electrofishing to determine bluegill and redear sunfish population statistics at Lake Malone was conducted in May 2012 (Tables 37-42). The 2012 catch rates for bluegill and redear are similar to catch rates over the last several years. Their length distributions have also been similar for several years. Although low in number, most redear collected are 8.0-9.0 in. The bluegill population is comprised mainly of 3.0-5.0 in fish. Length at age data collected in 2012 indicate bluegill growth has slowed since data were last collected in 2009. The Lake Malone SMP objectives for bluegill management state a mean length at age 2 at capture of ≥ 4.5 in, growth rate of 3-3+ years to reach 6.0 in, a CPUE ≥ 50.00 fish/hr for ≥ 6.0 in fish, and a CPUE of at least 1.00 fish/hr for ≥ 8.0 in fish. The only objective met in 2012 was the CPUE of bluegill > 6.0 in.

Mauzy Lake

Mauzy Lake was drawn down in October 2008 to replace the leaking water control structure. The lake remained 6-10 feet below normal pool until September-October 2009 when it was lowered to 13 feet below normal pool to replace the structure. Repair work was completed in November 2009 and the lake reached full pool in May 2010. Low water level prevented sampling in 2009. Normally scheduled sampling resumed in 2011.

Largemouth Bass Sampling

Electrofishing to assess the largemouth bass population at Mauzy was conducted in April (Tables 32, 43-47). Largemouth bass catch rates at Mauzy have been erratic the last few years as the population reacts to multiple drawdowns, but it is beginning to stabilize. The catch rate for bass less than 12.0 in increased in 2012 while the catch rate for bass 12.0-15.0 in decreased, both due to weaker year classes in 2009 and 2010. Numbers of largemouth bass $\geq$ 15.0 in have been fairly consistent. Length at age data indicate good growth rate with a mean length of 12.0 in at age 3.

Bluegill Redear Sunfish Sampling

Electrofishing to assess the bluegill and redear sunfish populations was conducted in May (39, 48-55). Bluegill catch rates have been highly variable the last few years. Flooded terrestrial vegetation present before the lake reached full pool hampered sampling in 2010 and reduced the CPUE. As with the largemouth bass population, the bluegill population is still reacting to the drawdowns. The high catch rate of 3.0-5.9 and 6.0-7.9 in bluegill in 2011 did not lead to an increase in $\geq$ 8.0 in bluegill as expected. Length at age data collected in 2012 suggest these fish are not growing as expected, probably due to the lower numbers of small bass for the last couple of years. Hopefully the increase in bass < 12.0 in observed in 2012 will decrease the number of small bluegill and improve their growth rate.

Redear sunfish were stocked in Lake Mauzy in 2004 and 2005 following renovation in 2003. Few redear sunfish were collected prior to 2007. In 2010, 169 were collected giving hope that the redear sunfish population may finally develop into a viable fishery. Catch rates of redear sunfish $\geq$ 6.0 inches in 2012 were similar to those collected in 2011 while the CPUE of redear < 6.0 in increased. Age frequency data indicate these are mostly 2-year old fish. A stable water level over the next few years should indicate whether recruitment continues and the redear sunfish succeed at Mauzy.

Carpenter Lake

Largemouth Bass

Largemouth bass were electrofished at Carpenter Lake in April to document population statistics (Tables 32, 56-58). The catch rate for 8.0-11.9 in bass in 2012 finally decreased after several years of increases. Hopefully this was not a sampling anomaly and their numbers continue to decline. Age data collected in 2010 indicated poor growth with few fish reaching 12.0 in prior to age 5. The catch rate for bass $\geq$ 15.0 in did increase in 2012 following several years of being relatively low. A shad eradication project is scheduled for January 2014. Carpenter Lake SMP objectives for largemouth bass management state: a CPUE $\geq$ 46.00 fish/hr for age 1 fish, a CPUE $\geq$ 35.00 fish/hr for 12.0-14.9 in fish, a CPUE $\geq$ 15.00 fish/hr for $\geq$ 15.0 in fish and a CPUE $\geq$ 1.0 fish/hr for $\geq$ 20.0 in fish. Age data were not collected so the CPUE for age 1 fish was the only objective not met in 2012.

Bluegill Redear Sunfish Sampling

Electrofishing to assess the bluegill/redear sunfish populations was conducted in May (Tables 39, 59-61). The bluegill catch rate declined from 2011, but is in line with those rates collected over the last few years. Bluegill catch rates at Carpenter Lake are historically variable, due in part to habitat conditions and sampling inefficiencies. Since gizzard shad were first collected in Carpenter Lake in 2006, the trend has been an increasing catch rate of bluegill < 6.0 in and a decreasing catch rate of bluegill $\geq$ 6.0 in. Age data collected in 2010 is similar to age data last collected in 2007, but both indicate growth rate has slowed from age data collected in 2002.

Carpenter Lake SMP bluegill management objectives state: a CPUE of at least 50.00 fish/hr for bluegill ≥ 6.0 in and a CPUE of at least 15.00 fish/hr for bluegill ≥ 8.0 in. The CPUE objective for bluegill ≥ 8.0 in. was not met in 2011. The shad eradication project scheduled for January 2014 will hopefully improve the bluegill population parameters.

Old and New Kingfisher Lakes

Old and New Kingfisher were drawn down December 2012 through March 2013. The lakes will be dredged to deepen and re-contour shallow shoreline areas during the late summer to early fall of 2013. The resulting material will be used to construct fishing jetties and widen shoreline areas to increase bank access. A water control structure will be installed and habitat such as Christmas trees, pallet attractors, and other materials will be added to the lake while it is down. The lakes will be restocked in the fall of 2013 and spring 2014. Sampling will be suspended for the next few years at these lakes.

Washburn Lake

Largemouth Bass

Electrofishing to assess largemouth bass population parameters at Washburn Lake was completed in April (Tables 32, 62-64). Catch rates for all length groups of largemouth bass increased in 2012. Largemouth bass at Washburn Lake are typically slow-growing with few reaching 12.0 in. Age data collected in 2010 indicate mean length at age 3 is 10.7 in and few fish in the population are greater than age 3.

A fertilization program was initiated in 2004 and growth rate increased. In 2008 a phytoplankton bloom could not be achieved and a subsequent alkalinity test indicated an alkalinity of 40 ppm. The lake was limed with approximately 50 tons of agricultural lime and fertilizer applications in 2009 again produced plankton blooms. In 2010 phytoplankton blooms dissipated approximately one to two weeks following fertilizer applications. In 2011 the alkalinity decreased to 40 ppm and a phytoplankton bloom could not be achieved. In July 2011 the lake was limed with 100 tons of agricultural lime and by December the alkalinity had increased to 60 ppm. As of March 2011, alkalinity had decreased to 54 ppm. Fertilization, and liming as necessary, will continue in an effort to increase growth rates.

Bluegill Sampling

Sampling to assess Washburn Lake's bluegill population was conducted in May (Tables 39, 65-67). Bluegill catch rates increased in 2012; most notable was the increase in bluegill ≥ 8.0 in. Age data collected in 2009 indicate growth rates have declined in recent years. The slower growth rate and older fish in the population indicate few fish are reaching a harvestable size and being removed from the population. The slow bluegill growth rate is most likely the result of low fertility as well. Liming and fertilizing efforts will continue in an effort to improve growth.

Peabody WMA

SCUBA transects to assess fish populations at Musky Lake and Goose Lake on Peabody WMA were conducted in June (Table 68-69). Largemouth bass observations at Goose Lake are similar to those of the past several years. The number of larger bluegill and redear (≥ 8.0 in) observed was similar to previous years, while the number of bluegill and redear ≤ 8.0 in was much greater than any previous sample. Observation rates of largemouth bass at Musky Lake were very similar to previous years. Observation rates for bluegill at Musky Lake were similar to previous samples with the exception of 8.0-10.0 in bluegill which was higher. Observation rates of redear sunfish at Musky Lake were much greater for redear < 8.0 in and similar to past samples for redear ≥ 8.0 in.

Table 1. Annual summary of sampling conditions by waterbody, species sampled and date for NWFD lakes during 2012.

Water body	Species	Date	Time (24hr)	Gear	Weather	Water temp. F	Water level	Secchi (in)	Conditions	Pertinent sampling comments
Nolin River Lake	LMB	April 18-19	1000	Shock	Sunny, breezy, 60s	66	505.5	26-28	Good	
Nolin River Lake	LMB	Oct 16, 18	1000	Shock	Sunny, light breeze to w indy, 55	65-66	512.7-512.1	54-72	Good	Water a little choppy day 2 at Moutardier
Nolin River Lake	Crappie	Oct 22-26		Trap Net	Sunny, breezy, 70s	62-66	510-508.9	24-42	Good	
Nolin River Lake	Crappie	Oct 31- Nov 2		Trap Net	Breezy to w indy, sunny 40-50	54	506.5	16-18	Good	
Rough River Lake	LMB	April 24-25	1000	Shock	Sunny to cloudy, cool, 60's	63-65	606-505.5	23-38	Good	
Rough River Lake	LMB	Oct 15, 17	1000	Shock	Sunny to partly cloudy, breezy, 55	66	492	31-40	Good	
Rough River Lake	Crappie	Nov 13-16		Trap Net	Sunny, cool, 45-50	51-54	492	30-48	Good	Lake up and stable, caught few fish
Rough River Lake	HSB	Nov 7-9		Gill Net	Sunny to cloudy, 45-60	56-57	492	28-34	Good	
Lake Malone	LMB	April 11-12	900	Shock	Sunny, cool, 50	62-65	pool	30-39	Good	
Lake Malone	BG	May 9-10	900	Shock	Sunny, 60-70s	76	pool	38	Good	
Lake Malone	LMB	Oct 9	900	Shock	Clear, cool, 45-50	65.5	pool	26	Good	
Mauzy Lake	LMB	April 9	900	Shock	Sunny, breezy, 60s	66	pool	52	Good	
Mauzy Lake	BG	May 7	900	Shock	Sunny, 70s	80	pool	72	Fair	Most beds empty, fish done spaw ning
Mauzy Lake	LMB	Oct 10	900	Shock	Sunny, cool, w indy, 50s	64	pool	54	Fair	Windy and bad glare from sun
Carpenter Lake	LMB	April 10, 13	900	Shock	Sunny, w indy, 65-70	65-68.5	pool	34	Good	Broke boom on 3rd run, did 3rd run 13th
Carpenter Lake	BG	May 8	900	Shock	Partly sunny, 70s	78	pool	28	Good	Fish deep, seemed to be finished spaw ning
Kingfisher Lakes	ALL	Fall		Shock						Removed fish prior to beginning draw dow n
Washburn Lake	LMB	April 10	1200	Shock	Sunny, w indy, cool	66	pool	81	Fair	
Washburn Lake	BG	May 8	1200	Shock	Partly sunny, 70s	77.5	pool	24	Fair	Heavy bloom, hard to see deeper fish
Goose Lake (PWMA)	ALL	June 4	1100	SCUBA	Mostly sunny	80	dow n 1.5'	20'	Fair	Upper end murky from beaver activity
Musky Lake (PWMA)	ALL	May 30	1100	SCUBA	Sunny, hot, breezy	83	dow n 1'	20'	Good	
Ken Lake (PWMA)	BC/CC	Sept 11	1000	Shock	Sunny, 80s		pool		Fair	Shocking high conductivity mine lake for catfish
Tin Lake (PWMA)	ALL	June 7	1000	Shock	Sunny, w arm, 80-85		pool	10+'	Fair	Checking for potential trophy BG/RE lakes
WQ Plot Lake (PWMA)	ALL	June 7	1000	Shock	Sunny, w arm, 80-85		pool	72	Fair	Checking for potential trophy BG/RE lakes
Honeycone Lake (PWMA)	ALL	June 7	1000	Shock	Sunny, w arm, 80-85		pool	10+'	Fair	Checking for potential trophy BG/RE lakes

Table 2. Species composition, length frequency, and CPUE (fish/hr) of black bass collected during 4.5 hours of 30-minute diurnal electrofishing runs at Nolin River Lake in April 2012.

		Inch class																				
Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE	Std. error
Upper	Largemouth bass	6	60	79	30	27	11	15	30	44	39	48	29	16	14	3	3	3	1	458	183.20	19.70
	Spotted bass		1	12	1		1	7	5	5	11	3	1							47	18.80	3.44
Lower	Largemouth bass	2	24	42	42	34	13	13	56	55	41	42	43	19	5	4	3	1		439	219.50	20.55
	Spotted bass		5	12	2	2	2	14	13	14	24	10								98	49.00	14.57
Total	Largemouth bass	8	84	121	72	61	24	28	86	99	80	90	72	35	19	7	6	4	1	897	199.33	14.79
	Spotted bass		6	24	3	2	3	21	18	19	35	13	1							145	32.22	8.17

nw d1psd.d12

Table 3. PSD and RSD[a] values obtained for each black bass species taken in spring electrofishing samples in each area of Nolin River Lake during April 2012; 95% confidence intervals are in parentheses.

Area	Species	No. ≥ 8.0 in	PSD	RSD[a]
Upper	Largemouth bass	256	61 (+/-6)	16 (+/- 5)
	Spotted bass	33	61 (+/-17)	3 (+/-6)
Lower	Largemouth bass	295	54 (+/-7)	11 (+/-4)
	Spotted bass	79	61 (+/-11)	0
Total	Largemouth bass	551	57 (+/-4)	13 (+/-3)
	Spotted bass	112	61 (+/-9)	1 (+/-2)

[a] Largemouth bass = RSD_{15}, spotted bass = RSD_{14}

nw d1psd.d12

Table 4. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Nolin River Lake during spring electrofishing 1999-2012.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	76.89	9.63	52.67	6.36	53.78	4.74	16.00	2.13	0.22	0.22	199.33	14.79
2011[a]												
2010[a]												
2009	30.00	5.73	25.11	4.32	36.00	3.64	5.33	1.05	0.67	0.33	96.44	7.05
2008	50.44	7.87	45.78	5.42	34.22	4.33	11.33	1.56	3.56	1.04	141.78	11.24
2007	53.33	9.95	17.33	2.24	27.56	4.86	8.22	1.31	0.67	0.47	106.44	14.21
2006	17.78	2.82	15.78	1.54	23.56	2.68	7.56	1.48	0.44	0.44	64.67	5.68
2005	27.11	4.98	27.11	4.14	25.33	3.86	14.22	2.32	0.44	0.29	93.78	10.08
2004	23.74	1.61	16.44	3.65	16.22	2.41	8.89	2.58	0.44	0.29	65.33	6.76
2003	12.89	3.73	10.22	2.30	8.89	2.21	7.56	1.99	0.00		39.56	9.16
2002	4.00	1.33	9.78	2.59	8.00	3.13	8.00	1.63	0.00		29.78	5.44
2001	5.50	1.68	27.00	7.44	18.00	3.30	9.00	2.80	0.00		59.50	11.72
2000	9.50	3.11	35.00	6.27	41.50	5.12	14.00	4.34	0.50	0.50	100.00	13.07
1999	n/d		61.33	16.84	56.89	9.18	8.00	1.76	0.44	0.44	126.22	26.01

[a] Unable to sample due to high water

nw d1psd.d12

Table 5. Mean back calculated lengths (in) at each annulus for largemouth bass collected at Nolin River Lake in April 2012.

Year		Age							
class	No.	1	2	3	4	5	6	7	8
2011	35	7.2							
2010	37	6.4	11.0						
2009	13	5.4	11.0	13.4					
2008	14	5.9	10.6	13.1	14.9				
2007	4	6.5	11.3	13.3	14.7	16.1			
2006	5	6.4	10.1	12.4	14.1	15.4	16.8		
2005	1	4.7	6.8	8.4	10.1	11.1	12.5	13.5	
2004	1	7.4	9.3	10.5	11.6	13.6	15.5	17.9	19.8
Mean		6.5	10.8	12.9	14.4	15.1	16.0	15.7	19.8
No.		110	75.0	38	25	11	7	2	1
Smallest		3.8	6.8	8.4	10.1	11.1	12.5	13.5	19.8
Largest		9.7	13.3	14.9	16.4	17.3	18.3	17.9	19.8
Std error		0.1	0.1	0.2	0.3	0.5	0.7	2.2	
95% CI (±)		0.2	0.2	0.3	0.5	0.9	1.5	9.0	

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Table 6. Age-frequency and CPUE (fish/hr) per inch class of largemouth bass electrofished at Nolin River Lake in April 2012.

	Inch class																			
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	No.	CPUE	Std. error	Age (%)
1	8	84	121	72	61	24	3											373	82.89	9.73	41.5
2							25	86	99	56	9							275	61.16	6.69	30.6
3										24	54	32						110	24.44	2.18	12.2
4											18	40	19	10				87	19.32	1.80	9.7
5													12		4			16	3.37	0.56	1.8
6													4	10	4	6		24	5.09	1.02	2.7
7											9							9	2.00	0.25	1.0
8																	4	4	0.89	0.48	0.4
Total	8	84	121	72	61	24	28	86	99	80	90	72	35	20	8	6	4	898			100
(%)	0.9	9.3	13.5	8.0	6.8	2.7	3.1	9.6	11.0	8.9	10.0	8.0	3.9	2.2	0.9	0.7	0.4	100			

nw d1psd.d12, nw d1lmba.d12

Table 7. Population assessment for largemouth bass based on spring electrofishing at Nolin River Lake from 2000-2012 (scoring based on statewide assessment).

Year	Mean length age 3 at capture	CPUE age 1	CPUE 12.0-14.9 in	CPUE ≥ 15.0 in	CPUE ≥ 20.0 in	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2012	13.4 (4)	82.89 (4)	53.78 (4)	16.00 (3)	0.22 (2)	0.582	44.1	17	Excellent
2011[a]									
2010[a]									
2009	12.6 (4)	29.15 (2)	36.00 (3)	5.33 (2)	0.67 (2)			13	Good
2008	12.6 (4)	49.67 (3)	34.22 (3)	11.33 (2)	3.56 (4)	0.553	42.5	16	Good
2007	12.6 (4)	51.63 (4)	27.56 (3)	8.22 (2)	0.67 (2)	0.609	45.0	15	Good
2006	12.6 (4)	17.04 (1)	23.56 (2)	7.56 (2)	0.44 (2)	0.447	36.0	11	Fair
2005	13.1 (4)	26.22 (2)	25.33 (3)	14.22 (3)	0.22 (2)	0.617	46.0	14	Good
2004	13.1 (4)	22.89 (2)	16.22 (2)	8.89 (2)	0.44 (2)	0.684	49.5	12	Good
2003	13.1 (4)	11.33 (1)	8.89 (1)	7.56 (2)	0.00 (0)	0.534	41.4	8	Fair
2002	13.1 (4)	3.78 (1)	8.00 (1)	8.00 (2)	0.00 (0)			8	Fair
2001	13.1 (4)	5.00 (1)	18.00 (2)	9.00 (2)	0.00 (0)			9	Fair
2000	13.1 (4)	9.00 (1)	41.40 (4)	14.00 (3)	0.50 (2)			14	Good

[a] Unable to sample due to high w ater

Table 8. Species composition, length frequency, and CPUE (fish/hr) of black bass collected during 3.0 hours of 30-minute diurnal electrofishing runs at Nolin River Lake in October 2012.

		Inch class																						
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	Std. error
Upper	Largemouth bass	1	98	59	18	21	16	14	21	30	34	59	39	22	12	3	3	3	2			455	303.33	77.91
	Spotted bass		20	41	13	4	1	1		1	4	3	2									90	60.00	23.18
Low er	Largemouth bass		1	12	11	9	1	28	55	53	80	47	21	16	11	2	5	1	3	1	1	358	238.67	37.56
	Spotted bass	1	8	22	17	3	1	6	4	9	8	6	2	1								88	58.67	17.02
Total	Largemouth bass	1	99	71	29	30	17	42	76	83	114	106	60	38	23	5	8	4	5	1	1	813	271.00	12.87
	Spotted bass	1	28	63	30	7	2	7	4	10	12	9	4	1								178	59.33	40.20

nw d1lmb.d12

Table 9. Number of fish and relative weight (Wr) for length groups of largemouth bass collected at Nolin River Lake during October 2012. Standard errors are in parentheses.

Species	Area	Length group					
		8.0-11.9 in		12.0-14.9 in		≥15.0 in	
		No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Upper	49	90 (1)	42	88 (1)	19	89 (3)
Largemouth bass	Lower	26	80 (1)	22	83 (2)	16	85 (3)
Largemouth bass	Total	75	86 (1)	64	86 (1)	35	87 (2)

nwd1lmb.d12

Table 10. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in fall electrofishing samples at Nolin River Lake 2001-2012.

Year class	Area	Age 0 Mean length	Age 0 Std. error	Age 0 CPUE	Age 0 Std. error	Age 0 ≥5.0 in CPUE	Age 0 ≥5.0 in Std. error	Age 1 CPUE	Age 1 Std. error
2012	Total	5.3	0.11	98.33	32.59	41.33	4.55		
2011	Total	5.5	0.07	89.33	16.06	51.33	8.11	82.89	9.73
2010	Total	5.0	0.08	107.33	21.31	46.22	9.12	n/d[a]	
2009	Total	3.6	0.06	128.75	47.37	20.50	3.18	n/d[a]	
2008	Total	3.6	0.04	139.33	45.55	16.67	4.08	29.15	5.61
2007	Total	4.1	0.07	66.44	14.34	12.89	2.81	49.67	7.78
2006	Total	4.9	0.07	84.00	22.97	40.22	7.47	51.63	9.65
2005	Total	5.0	0.08	92.00	34.94	41.78	15.36	17.04	2.67
2004	Total	4.1	0.07	41.30	11.20	9.60	1.60	26.22	4.70
2003	Total	4.4		28.40	4.90	14.20	2.60	22.89	1.57
2002	Total	4.5		28.60	11.80	14.40	1.40	11.33	3.11
2001	Total	3.0		76.00	29.20	7.30	0.90	3.78	1.10

[a] Unable to electrofish spring 2010 or 2011

nwd1lmb.d12

Table 11. Length frequency and CPUE (fish/nn) for each species of crappie collected in 127 net-nights of sampling at Nolin River Lake during October 2012.

Species	Inch class											Total	CPUE	Std. error
	3	4	5	6	7	8	9	10	11	12	13			
White crappie	11	78	54	91	350	128	103	120	42	13	4	994	7.83	0.91
Black crappie	5	7	1	10	7	7	9	4	1			51	0.40	0.07

nwd1tn.d12

Table 12. PSD and RSD_{10} values calculated for crappie collected in trap nets from Nolin River Lake during October 2012; 95% confidence limits are in parentheses.

Lake/Species	No.	PSD	RSD_{10}
Nolin River Lake			
White crappie	905	45 (+\-3)	20 (+\-3)
Black crappie	39	54 (+\-15)	13 (+\-11)

nw d1tn.d12

Table 13. Mean back calculated lengths (in) at each annulus for white crappie collected at Nolin River Lake in October 2012.

Year		Age			
class	No.	1	2	3	4
2011	31	4.5			
2010	23	5.1	7.9		
2009	3	4.7	8.2	10.4	
2008	9	5.2	8.3	10.2	11.3
Mean		4.8	8.0	10.3	11.3
No.		66	35	12	9
Smallest		3.6	5.7	9.0	10.2
Largest		9.8	9.2	11.1	12.4
Std error		0.1	0.1	0.2	0.2
95% CI (±)		0.2	0.2	0.3	0.4

nw d1w ca.d12

Table 14. Age-frequency and CPUE (fish/nn) per inch class of white crappie trap netted for 127 net-nights at Nolin River Lake in October 2012.

	Inch class														
Age	3	4	5	6	7	8	9	10	11	12	13	Total	Age %	CPUE	Std. error
0	11	78	54									143	14.4	1.12	
1				91	350	80	41	12				574	57.7	4.52	0.58
2						48	62	96	28			234	23.5	1.84	0.24
3									5	4		9	1.0	0.07	0.01
4								12	9	9	4	34	3.4	0.27	0.05
Total	11	78	54	91	350	128	103	120	42	13	4	994	100		
(%)	1.1	7.8	5.4	9.2	35.2	12.9	10.4	12.1	4.2	1.3	0.4	100.0			

nw d1tn.d12, nw d1w ca.d12

Table 15. Population assessment for white crappie based on fall trapnetting at Nolin River Lake from 2001-2012 (scoring based on statewide assessment).

Year	CPUE excluding age 0	CPUE age 1	CPUE age 0	CPUE ≥8.0 in	Mean length age 2+ at capture	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2012	6.70 (2)	4.52 (2)	1.12 (1)	3.23 (2)	10.1 (4)	1.112	67.1	11	Fair
2011	5.74 (2)	4.42 (2)	1.64 (1)	3.54 (2)	10.9 (4)	1.274	72.3	11	Fair
2010	6.73 (2)			6.02 (3)					
2009	14.14 (3)	11.65 (3)	1.22 (1)	8.92 (3)	10.4 (4)	1.638	80.6	14	Good
2008	6.03 (2)	3.45 (2)	2.35 (1)	4.79 (2)	10.4 (4)	0.976	62.3	11	Fair
2007	7.43 (2)	3.71 (2)	0.38 (1)	6.14 (3)	10.4 (4)	0.882	58.6	12	Fair
2006	5.91 (2)	3.20 (2)	2.02 (1)	4.37 (2)	9.7 (4)	0.876	58.3	11	Fair
2005	8.76 (2)	3.64 (2)	1.42 (1)	7.41 (3)	9.7 (4)	0.749	52.7	12	Fair
2004	8.56 (2)	4.15 (2)	5.09 (2)	6.93 (3)	9.7 (4)	0.630	46.7	13	Good
2003	13.23 (3)	8.00 (3)	2.04 (1)	8.65 (3)	9.8 (4)	1.107	66.9	14	Good
2002	11.99 (2)	10.02 (3)	4.26 (2)	8.78 (3)	9.5 (3)	1.571	79.2	13	Good
2001	10.21 (2)	4.82 (2)	2.62 (1)	3.87 (2)	9.1 (3)	0.910	59.7	10	Fair

Table 16. Species composition, length frequency, and CPUE (fish/hr) of black bass collected during 4.5 hours of 30-minute diurnal electrofishing runs at Rough River Lake in April 2012.

		Inch class																					
Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	Std. error
Upper	Largemouth bass	1	4	3	18	22	18	12	31	28	19	13	26	21	16	17	11	7	2	5	274	109.60	12.16
	Spotted bass	1		1					1		4	2	2								11	4.40	1.33
Lower	Largemouth bass	2	4	5	18	39	42	15	54	36	25	30	19	21	11	13	5	6	4	5	354	177.00	43.56
	Spotted bass		2		1	3	3	4	11	9	5	7	5	1							51	25.50	3.10
Total	Largemouth bass	3	8	8	36	61	60	27	85	64	44	43	45	42	27	30	16	13	6	10	628	139.56	22.31
	Spotted bass	1	2	1	1	3	3	4	12	9	9	9	7	1							62	13.78	3.98

nw d2psd.d12

Table 17. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Rough River Lake during spring samples 1999-2012.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	25.78	4.34	52.44	11.69	29.33	4.28	32.00	7.22	3.56	1.37	139.56	22.31
2011[a]												
2010[a]												
2009	29.11	3.15	47.78	4.17	42.67	4.26	17.56	2.49	0.67	0.33	137.11	6.95
2008[a]												
2007	26.44	3.46	27.33	4.70	27.78	4.06	13.11	1.16	0.22	0.22	94.67	8.92
2006	21.11	2.58	28.67	10.06	28.22	4.38	11.33	2.81	0.44	0.29	89.33	16.73
2005	26.89	6.15	34.00	7.60	38.89	5.15	14.22	2.48	0.67	0.33	114.00	41.65
2004	31.11	3.86	35.56	5.12	12.89	2.16	9.78	1.08	0.22	0.22	89.33	9.50
2003	61.56	7.01	27.78	6.93	20.00	5.56	18.44	3.18	0.67	0.33	127.78	15.36
2002	7.33	1.70	7.11	2.29	2.00	0.88	1.56	0.44	0.00	0.00	18.00	3.82
2001	30.67	7.45	21.33	4.47	16.44	4.96	3.11	1.74	0.00	0.00	71.56	11.18
2000	15.11	3.45	32.89	4.31	21.78	2.76	5.33	2.11	1.78	0.97	75.11	6.42
1999	n/d		28.44	2.05	21.33	4.11	8.89	2.38	0.44	0.44	58.67	4.57

[a] Unable to sample due to high water

nw d2psd.d12

Table 18. PSD and RSD[a] values obtained for each black bass species taken in spring electrofishing samples in each area of Rough River Lake during April 2012; 95% confidence intervals are in parentheses.

Area	Species	No. ≥ 8.0 in	PSD	RSD[a]
Upper	Largemouth bass	226	61 (+/-6)	35 (+/-6)
	Spotted bass	9	89 (+/-22)	22 (+/-29)
Lower	Largemouth bass	286	49 (+/-6)	23 (+/-4)
	Spotted bass	48	56 (+/-14)	12 (+/-9)
Total	Largemouth bass	512	54 (+/-4)	28 (+/-4)
	Spotted bass	57	61 (+/-13)	14 (+/-9)

[a] Largemouth bass RSD_{15}, spotted bass RSD_{14}

nw d2psd.d12

Table 19. Population assessment for largemouth bass based on spring electrofishing at Rough River Lake from 1999-2012 (scoring based on statewide assessment).

Year	Mean length age 3 at capture	CPUE age 1	CPUE 12.0-14.9 in	CPUE ≥ 15.0 in	CPUE ≥ 20.0 in	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2012		36.44 (3)	29.33 (3)	32.00 (4)	3.56 (4)			14-18	G-E
2011[a]									
2010[a]									
2009	12.6 (4)	28.44 (2)	42.67 (4)	17.56 (3)	0.67 (2)	0.884	58.7	15	Good
2008[a]									
2007	13.6 (4)	27.06 (2)	27.78 (3)	13.11 (3)	0.22 (2)	0.576	42.3	14	Good
2006	13.6 (4)	21.98 (2)	28.22 (3)	11.33 (2)	0.44 (2)	0.773	53.8	13	Good
2005	13.6 (4)	28.04 (2)	38.89 (4)	14.22 (3)	0.67 (2)	0.759	53.2	15	Good
2004	13.6 (4)	38.82 (3)	12.89 (1)	9.78 (2)	0.22 (2)	0.862	57.8	12	Good
2003	12.5 (4)	44.30 (3)	20.00 (2)	18.40 (3)	0.67 (2)	0.797	54.9	14	Good
2002	12.5 (4)	7.93 (1)	2.00 (1)	1.56 (1)	0.00 (0)			7	Poor
2001	12.5 (4)	28.00 (2)	16.44 (2)	3.11 (1)	0.00 (0)			9	Fair
2000	12.5 (4)	10.52 (1)	21.78 (2)	5.33 (2)	1.78 (2)			12	Good
1999	12.5 (4)	2.96 (1)	21.33 (2)	8.89 (2)	0.44 (2)			11	Fair

[a] Unable to sample due to high w ater

Table 20. Species composition, length frequency, and CPUE (fish/hr) of black bass collected during 3.00 hours of 30-minute diurnal electrofishing runs at Rough River Lake in October 2012.

		Inch class																						
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	Std. error
Upper	Largemouth bass		10	6	19	6	5	7	9	34	29	20	11	5	6	5	2	6	3	1		184	122.67	13.78
	Spotted bass		5	3	3		1		1	6												19	12.67	6.36
Lower	Largemouth bass		4	11	3	4	2	15	22	28	21	18	8	7	4	3	7	1		6	1	165	110.00	8.08
	Spotted bass	3	8	12	2	2	5		1	5	1	1		1								41	27.33	7.51
Total	Largemouth bass		14	17	22	10	7	22	31	62	50	38	19	12	10	8	9	7	3	7	1	349	116.33	7.68
	Spotted bass	3	13	15	5	2	6		2	11	1	1		1								60	20.00	5.49

nw d2lmb.d12

Table 21. Number of fish and relative weight (Wr) for length groups of largemouth bass collected at Rough River Lake during October 2012. Standard errors are in parentheses.

		Length group					
Species	Area	8.0-11.9 in		12.0-14.9 in		≥15.0 in	
		No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Upper	47	90 (1)	34	92 (2)	22	95 (2)
Largemouth bass	Lower	43	81 (1)	23	84 (2)	22	93 (2)
Largemouth bass	Total	90	86 (1)	57	89 (1)	44	94 (1)

nw d2lmb.d12

Table 22. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in fall electrofishing samples at Rough River Lake 2001 - 2012.

		Age 0		Age 0		Age 0 ≥ 5.0		Age 1	
Year class	Area	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2012	Total	5.7	0.18	28.33	4.18	18.00	2.42		
2011	Total	4.9	0.09	89.11	21.5	41.56	5.36	36.44	4.34
2010	Total	4.8	0.09	51.33	9.00	22.44	4.00	n/d[a]	
2009	Total							n/d[a]	
2008	Total	5.1	0.11	56.9	13.49	28.7	7.85		
2007	Total	4.2	0.07	37.1	7.33	9.1	2.43	n/d[a]	
2006	Total	4.9	0.09	64.0	18.70	30.2	7.40	27.06	3.33
2005	Total	4.3	0.08	72.4	10.40	22.4	4.40	21.98	2.82
2004	Total	4.0	0.06	100.4	18.57	24.2	5.94	28.04	5.91
2003	Total	4.8		34.9	3.20	20.0	2.90	32.82	3.85
2002	Total	5.0		60.5	18.30	34.3	2.60	44.30	5.61
2001	Total	4.0		38.6	3.90	29.3	0.90	7.93	1.70

[a] = Unable to sample due to high water

nw d2lmb.d12

Table 23. Length frequency and CPUE (fish/nn) for each species of crappie collected in 72 net-nights of sampling at Rough River Lake during November 2012.

	Inch class														
Species	3	4	5	6	7	8	9	10	11	12	13	14	Total	CPUE	Std. error
White crappie	1	27	38	90	72	37	2	4	1			1	273	3.79	0.73
Black crappie		4	1	4	4								13	0.18	0.07

nw d2tn.d12

Table 24. Mean back calculated lengths (in) at each annulus for white crappie collected at Rough River Lake in November 2012.

Year		Age		
class	No.	1	2	3
2011	10	3.7		
2010	18	4.3	6.0	
2009	15	4.3	6.2	7.9
Mean		4.2	6.1	7.9
No.		43	33	15
Smallest		3.1	3.7	6.0
Largest		6.0	7.4	9.3
Std error		0.1	0.1	0.2
95% CI (±)		0.1	0.2	0.5

nw d2w ca.d12

Table 25. Length frequency and CPUE (fish/nn) for hybrid striped bass collected in 8 net-nights of sampling at Rough River Lake during November 2012.

	Inch class																						
Species	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	Total	CPUE	Std. error
Hybrid striped bass	3	1	1		1	10	34	36	17	20	31	48	44	18	12	5	2			1	284	35.50	7.45

nw d2gn.d12

Table 26. Mean back calculated lengths (in) at each annulus for hybrid striped bass collected at Rough River Lake in November 2012.

Year		Age								
class	No.	1	2	3	4	5	6	7	8	9
2011	37	8.8								
2010	13	8.7	13.8							
2009	27	8.7	14.6	17.4						
2008	5	10.2	14.8	16.6	17.9					
2007	3	9.6	15.2	18.0	19.1	20.7				
2006	3	7.2	14.4	17.0	18.7	19.6	20.6			
2005	3	9.0	14.0	16.2	17.4	18.1	18.8	19.4		
2004	2	9.2	15.2	17.2	18.6	19.4	19.9	20.5	21.1	
2003	1	14.9	18.4	19.7	21.1	22.2	23.3	24.3	25.1	26.0
Mean		8.9	14.5	17.3	18.4	19.7	20.1	20.6	22.5	26.0
No.		94	57	43	17	12	9	6	3	1
Smallest		6.3	7.0	15.3	16.4	17.1	18.1	18.9	19.8	26.0
Largest		14.9	18.4	20.0	21.1	22.2	23.3	24.3	25.1	26.0
Std error		0.2	0.2	0.2	0.3	0.5	0.6	0.9	1.5	
95% CI (±)		0.3	0.4	0.3	0.5	0.9	1.1	1.5	2.5	

nw d2hsba.d12

Table 27. Age-frequency and CPUE (fish/nn) per inch class of hybrid stiped bass collected in 8 net-nights of sampling at Rough River Lake during November 2012.

	Inch class																							
Age	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	No.	CPUE	Std. error	Age (%)
0	3	1	1		1																6	0.75		2.1
1						10	34	36	13												93	11.59	3.34	32.4
2									4	15	16										35	4.34	1.34	12.1
3										5	16	36	28	8	4						97	12.03	2.75	33.8
4												12	8								20	2.50	0.61	7.0
5														3	4	3					10	1.25	0.29	3.5
6													4		4		2				10	1.25	0.34	3.5
7													4	5							9	1.14	0.27	3.1
8														3		3					6	0.63	0.28	2.1
9																				1	1	0.13	0.13	< 0.1
Total	3	1	1		1	10	34	36	17	20	32	48	44	19	12	6	2			1	287			
(%)	1	< 0.1	< 0.1		< 0.1	3.5	11.8	12.5	5.9	7.0	11.1	16.7	15.3	6.6	4.2	2.1	< 0.1			< 0.1				

nw d2gn.d12, nw d2hsba.d12

Table 28. Population assessment for hybrid striped bass based on fall gill netting at Rough River Lake from 1999-2012 (scoring based on statewide assessment).

Year	CPUE excluding age 0	Mean length age 2+ at capture	CPUE ≥ 15.0 in	CPUE age 1	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2012	35.12 (4)	16.7 (2)	25.12 (4)	11.59 (4)	0.717	51.2	14	Excellent
2010	60.23 (4)	16.8 (2)	34.46 (4)	28.88 (4)	0.525	40.8	14	Excellent
2008	25.10 (4)	16.3 (2)	19.27 (4)	6.33 (3)	0.544	42.0	13	Good
2006	23.67 (4)	16.9 (2)	14.50 (4)	8.92 (3)	0.447	36.1	13	Good
2003	33.87 (4)	16.5 (2)	30.87 (4)	3.13 (2)	0.680	49.8	12	Good
2001	29.88 (4)	15.9 (1)	16.75 (4)	13.08 (4)			13	Good
1999	26.38 (4)	16.5 (2)	18.50 (4)	8.13 (3)			13	Good

Table 29. Number of fish and the relative weight (Wr) for each length group of hybrid striped bass collected at Rough River Lake during November 2012; 95% confidence limits are in parentheses.

Length group					
8.0-11.9 in		12.0-14.9 in		≥ 15.0 in	
No.	Wr	No.	Wr	No.	Wr
3	88 (2)	70	81 (1)	170	82 (1)

nw d2gn.d12

Table 30. Length frequency and CPUE (fish/hr) of largemouth bass collected during 2.5 hours of 30-minute diurnal electrofishing runs at Lake Malone in April 2012.

	Inch class																				
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	Std. error
Largemouth bass	7	39	22	11	37	138	62	58	51	55	38	29	32	26	20	22	15	5	2	669	267.60	44.52

nw d3psd.d12

Table 31. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Lake Malone 1999-2012.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err	CPUE	Std. err.
2012	46.40	18.40	123.60	18.06	48.80	10.93	48.80	10.33	2.80	1.02	267.60	44.52
2011	45.60	10.34	56.00	7.27	35.20	7.66	34.40	6.76	4.00	1.10	171.20	26.75
2010	37.20	8.78	49.60	5.04	49.60	5.42	62.00	7.07	3.60	1.60	198.40	16.29
2009	10.00	1.41	29.60	4.40	51.20	7.55	37.20	3.56	5.60	0.40	128.00	11.71
2008	18.80	6.47	78.80	6.59	77.20	4.96	43.60	8.06	6.40	1.47	218.40	12.35
2007	29.20	3.98	80.40	10.40	30.80	1.96	37.60	10.34	3.60	1.33	178.00	17.80
2006	31.60	3.71	81.60	14.33	22.40	2.14	28.00	5.87	5.20	1.62	163.60	19.82
2005	32.40	4.83	69.20	14.31	32.00	8.74	53.60	5.71	8.40	1.17	187.20	30.12
2004	28.40	3.87	53.60	5.74	26.40	4.17	53.20	3.93	6.00	1.55	161.60	12.75
2003	57.00	3.32	76.50	6.75	35.00	5.00	57.50	4.86	9.50	2.75	226.00	12.08
2002[a]	8.57	3.32	43.43	4.97	43.43	8.48	41.71	7.55	8.00	3.02	137.14	17.45
2001[a]	18.00	8.05	66.00	12.03	50.00	7.98	31.33	6.32	0.67	0.67	165.33	15.55
2000[a]	13.33	3.37	46.00	4.23	51.33	7.83	24.00	4.00	2.00	0.89	134.67	14.52
1999[a]	n/d		48.67	9.82	61.33	6.98	23.33	4.89	2.67	1.33	133.33	12.72

[a] Nocturnal sample

nw d3psd.d12

Table 32. PSD and RSD_{15} values obtained for largemouth bass taken in spring electrofishing samples at Lake Malone, Carpenter Lake, Kingfisher Lake, Mauzy Lake and Washburn Lake during April 2012; 95% confidence intervals are in parentheses.

Lake	Species	No. ≥8.0 in	PSD	RSD_{15}
Malone	Largemouth	553	44 (+\-4)	22 (+\-4)
Mauzy	Largemouth	102	59 (+\-10)	39 (+\-10)
Carpenter	Largemouth	108	48 (+/-10)	16 (+\-7)
New Kingfisher	Largemouth	n\d		
Washburn	Largemouth	91	10 (+\-6)	3 (+\-3)

nw d3psd.d12
nw d4psd.d12
nw d5psd.d12
nw d8psd.d12

Table 33. Population assessment for largemouth bass based on spring electrofishing at Lake Malone from 2001-2012 (scoring based on statewide assessment).

Year	Mean length age 3 at capture	CPUE age 1	CPUE 12.0-14.9 in	CPUE ≥ 15.0 in	CPUE ≥ 20.0 in	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2012		31.20 (2)	48.80 (3)	48.80 (4)	2.80 (3)				
2011		41.20 (2)	35.20 (3)	34.40 (4)	4.00 (4)				
2010	10.4 (2)	15.10 (1)	49.60 (3)	62.00 (4)	3.60 (3)	0.397	32.7	13	Good
2009	10.3 (2)	8.80 (1)	51.20 (4)	37.20 (4)	5.60 (4)	0.293	25.4	15	Good
2008	10.3 (2)	16.40 (2)	77.20 (4)	43.60 (4)	6.40 (4)	0.357	30.0	16	Good
2007	10.3 (2)	29.20 (2)	30.80 (2)	37.60 (4)	3.60 (3)	0.330	28.1	13	Good
2006	11.5 (4)	20.20 (2)	22.40 (2)	28.00 (3)	5.20 (4)	0.526	40.9	15	Good
2005	11.5 (4)	19.00 (2)	32.00 (2)	53.60 (4)	8.40 (4)	0.387	32.0	16	Good
2004	11.5 (4)	19.00 (2)	26.40 (2)	53.20 (4)	6.00 (4)	0.365	31.1	16	Good
2003	11.5 (4)	35.00 (2)	35.00 (3)	48.00 (4)	8.50 (4)	0.416	34.1	17	Excellent
2002	11.5 (4)	6.00 (1)	43.43 (3)	41.71 (4)	8.00 (4)			16	Good
2001	12.9 (4)	14.00 (1)	50.00 (4)	31.33 (4)	0.67 (1)			14	Good

Table 34. Length frequency and CPUE (fish/hr) of largemouth bass collected during 1.5 hours of 30-minute diurnal electrofishing runs at Lake Malone in October 2012.

		Inch class																		
Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE	Std. error
Total	Largemouth bass	15	40	16	13	21	30	36	41	21	14	14	14	6	3	5	4	1	294	196.00	20.82

nw d3lmb.d12

Table 35. Number of fish and relative weight (Wr) for length groups of largemouth bass collected at Lake Malone during October 2012. Standard errors are in parentheses.

Species	Location	Length group					
		8.0-11.9 in		12.0-14.9 in		≥15.0 in	
		No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Malone	84	82 (1)	42	87 (2)	19	91 (2)

nw d3lmb.d12

Table 36. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in fall electrofishing samples at Lake Malone 2002-2012.

		Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
Year class	Area	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2012	Total	4.7	0.1	53.33	3.71	16.67	2.91		
2011	Total	4.3	0.1	54.00	15.68	9.00	1.91	31.20	4.43
2010	Total	4.8	0.1	76.40	13.08	30.00	3.22	41.20	3.74
2009	Total	4.1	0.1	12.00	4.43	2.00	0.63	15.10	4.14
2008	Total	4.6	0.1	14.80	4.76	6.00	2.37	8.80	1.02
2007	Total	4.5	0.2	30.40	7.36	11.20	2.58	16.40	7.14
2006	Total	5.2	0.1	65.60	5.15	42.40	3.71	29.20	3.98
2005	Total	4.9	0.1	50.00	10.00	25.50	5.00	20.20	2.08
2004	Total	4.1	0.1	49.20	10.73	8.40	1.72	19.00	3.48
2003	Total	3.1		103.20		2.40		19.00	2.88
2002[a]	Total	4.3		39.20		14.40		35.00	5.12

[a] Nocturnal sample

nw d3lmb.d12

Table 37. Length frequency and CPUE (fish/hr) for bluegill and redear sunfish collected in 1.25 hours of electrofishing at Lake Malone in May 2012.

Species	Inch class									Total	CPUE	Std. error
	1	2	3	4	5	6	7	8	9			
Bluegill	1	70	254	258	87	63	28			761	608.80	60.06
Redear sunfish				1		1	2	4	2	10	8.00	3.77

nw d3bg.d12

Table 38. Spring electrofishing CPUE (fish/hr) for each length group of bluegill (1999 - 2012) and redear sunfish (2003 - 2012) collected at Lake Malone.

Bluegill	Length group											
	<3.0 in		3.0-5.9 in		6.0-7.9 in		≥8.0 in		≥10.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	56.80	15.89	479.20	46.10	72.80	13.30	0.00		0.00		608.80	60.06
2011	30.40	7.89	452.00	41.25	72.00	11.62	0.00		0.00		554.40	53.61
2010	54.40	12.89	481.60	56.35	51.20	14.12	0.00		0.00		587.20	52.97
2009	24.80	6.36	177.60	35.01	52.00	16.62	0.00		0.00		254.40	44.31
2008	70.40	17.15	343.20	34.39	100.00	19.71	0.80	0.80	0.00		514.40	44.49
2007	75.20	17.12	324.00	28.85	90.40	9.77	0.00		0.00		489.60	39.89
2006	48.00	18.51	320.00	36.19	92.80	13.76	0.80	0.80	0.00		461.60	57.01
2005	27.69	8.21	376.92	44.63	46.15	10.76	0.00		0.00		450.77	54.06
2004	16.15	9.62	300.77	49.90	73.08	15.44	0.00		0.00		390.00	56.47
2003	25.38	6.49	173.08	24.06	22.31	6.22	0.00		0.00		220.77	25.54
2002	16.67	6.21	331.67	40.59	59.17	10.50	0.00		0.00		407.50	50.54
2001	7.33	2.17	222.00	30.51	46.67	8.98	0.67	0.67	0.00		276.67	34.54
2000	21.33	5.23	130.67	21.95	50.67	15.79	2.00	0.89	0.00		204.67	30.51
1999	53.33	14.30	20.67	4.31	0.67	0.67	0.00		0.00		74.67	18.03

nw d3bg.d12

Redear	Length group											
	<3.0 in		3.0-5.9 in		6.0-7.9 in		≥8.0 in		≥10.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	0.00		0.80	0.80	2.40	1.71	4.80	2.44	0.00		8.00	3.77
2011	0.00		3.20	2.44	4.80	3.41	14.40	4.74	5.60	2.40	22.40	7.43
2010	0.00		2.40	1.71	0.80	0.80	14.40	6.73	3.20	1.77	17.60	8.16
2009	0.00		0.00		0.80	0.80	12.00	4.17	5.60	2.08	12.80	4.33
2008	0.00		3.20	1.77	7.20	3.86	17.60	4.89	7.20	2.78	28.00	8.11
2007	0.00		4.80	3.99	9.60	4.74	16.80	4.84	12.00	4.50	31.20	9.35
2006	0.00		4.80	2.13	1.60	1.60	5.60	3.38	2.40	2.40	12.00	6.56
2005	0.00		0.77	0.77	3.08	1.26	9.23	3.59	4.62	2.61	13.08	3.98
2004	0.00		1.54	1.03	0.77	0.77	2.31	1.64	0.77	0.77	4.62	2.05
2003	0.00		0.00		0.77	0.77	4.62	1.70	1.54	1.03	5.38	2.00

nw d3bg.d12

Table 39. PSD and RSD[a] values obtained for bluegill and redear sunfish collected in spring electrofishing samples at NWFD state-owned lakes during May 2012; 95% confidence intervals are in parentheses.

Lake	Species	No.	PSD	RSD[a]
Malone	Bluegill	690	13 (+\-3)	0
	Redear sunfish	10	80 (+\-26)	20 (+\-26)
Mauzy	Bluegill	608	9 (+/-2)	0
	Redear sunfish	178	24 (+/-6)	1 (+\-2)
Carpenter	Bluegill	182	51 (+\-7)	0
	Redear sunfish	35	26 (+\-15)	3 (+\-6)
New Kingfisher	Bluegill	n/d		
Washburn	Bluegill	122	35 (+\-9)	9 (+\-5)
	Redear sunfish	11	0	0

[a] Bluegill = RSD_8, Redear = RSD_9

nw d3bg.d12
nw d4bg.d12
nw d5bg.d12
nw d8bg.d12

Table 40. Mean back calculated lengths (in) at each annulus for bluegill collected at Lake Malone in April 2012.

Year		Age						
class	No.	1	2	3	4	5	6	7
2011	1	3.0						
2010	15	2.3	3.8					
2009	9	2.3	3.9	4.8				
2008	9	2.6	4.3	5.4	6.0			
2007	8	2.2	4.3	5.5	6.3	6.8		
2006	8	1.6	3.4	4.6	5.6	6.5	7.0	
2005	1	2.3	4.0	5.0	5.8	6.6	6.9	7.2
Mean		2.2	3.9	5.1	6.0	6.6	7.0	7.2
No.		51	50	35	26	17	9	1
Smallest		0.9	2.8	4.1	5.1	6.2	6.5	7.2
Largest		3.7	5.1	6.3	7.1	7.3	7.7	7.2
Std error		0.1	0.1	0.1	0.1	0.1	0.1	
95% CI (+)		0.1	0.1	0.2	0.2	0.1	0.2	

nw d3bga.d12

Table 41. Age-frequency and CPUE (fish/hr) per inch class of bluegill collected at Lake Malone in April 2012.

	Inch class								
Age	3	4	5	6	7	Total	Age %	CPUE	Std. error
1	25					25	3.6	20.32	3.01
2	229	129				358	51.9	286.08	33.50
3		129	33			162	23.5	129.30	11.17
4			54	11	6	71	10.3	56.88	8.61
5				32	6	38	5.5	30.18	4.88
6				21	12	33	4.8	26.76	5.27
7					3	3	0.4	2.49	1.00
Total	254	258	87	64	27	690			
(%)	36.8	37.4	12.6	9.3	3.9		100		

nw d3bg.d12, nw d3bga.d12

Table 42. Population assessment for bluegill based on spring electrofishing at Lake Malone from 2000-2012 (scoring based on statewide assessment).

Year	Mean length age 2 at capture	Years to 6.0 in	CPUE ≥ 6.0 in	CPUE ≥ 8.0 in	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2012	3.8 (2)	4-4+ (2)	72.80 (3)	0.00 (0)	0.774	53.9	7	Fair
2011			72.00 (3)	0.00 (0)				
2010			51.20 (3)	0.00 (0)				
2009	4.9 (3)	3-3+ (3)	52.00 (3)	0.00 (0)	0.957	61.6	8	Fair
2008	4.4 (2)	3-3+ (3)	100.80 (4)	0.80 (2)	0.599	45.0	11	Good
2007	4.4 (2)	3-3+ (3)	90.40 (4)	0.00 (0)	0.573	43.6	9	Fair
2006	4.4 (2)	3-3+ (3)	93.60 (4)	0.80 (2)	0.452	36.4	11	Good
2005	3.9 (2)	3-3+ (3)	48.00 (2)	0.00 (0)			7	Fair
2004	3.9 (2)	3-3+ (3)	73.08 (3)	0.00 (0)			8	Fair
2003	3.9 (2)	3-3+ (3)	7.75 (1)	0.00 (0)	1.028	64.2	6	Poor
2002	3.9 (2)	3-3+ (3)	56.80 (3)	0.00 (0)			8	Fair
2001	3.9 (2)	3-3+ (3)	47.33 (2)	0.67 (2)			9	Fair
2000	3.9 (2)	3-3+ (3)	52.67 (3)	2.00 (2)			10	Fair

Table 43. Length frequency and CPUE (fish/hr) of largemouth bass collected during 1.0 hour of diurnal electrofishing runs at Mauzy Lake in April 2012.

	Inch class																						
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total	CPUE	Std. error
Largemouth bass	1	31	33	13	18	14	11	8	9	3	5	12	9	8	2	1	5	5	6	3	1	198	198.00	12.81

nw d4psd.d12

Table 44. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Mauzy Lake during spring 1999-2012.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥ 20.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	96.00	16.49	42.00	2.58	20.00	4.90	40.00	9.09	15.00	3.42	198.00	12.81
2011	48.00	11.55	21.33	3.53	58.67	2.67	40.00	4.62	10.67	3.53	168.00	8.00
2010	26.67	3.53	78.67	13.13	21.33	2.67	44.00	10.07	17.33	8.11	170.67	26.67
2009[a]												
2008	104.00	31.37	147.00	16.28	21.00	5.00	83.00	9.29	7.00	1.91	355.00	48.23
2007	46.00	5.29	49.00	12.26	40.00	2.83	64.00	17.51	0.00		199.00	31.0
2006	68.00	14.05	40.00	4.00	24.00	4.00	60.00	4.62	0.00		192.00	21.17
2005	52.00	8.64	25.00	6.61	147.00	11.47	21.00	7.90	4.00	1.63	245.00	22.29
2004	20.00	9.24	132.00	2.31	5.33	1.33	6.67	1.33	0.00		164.00	10.58
2003[b]	98.61	18.69	163.19	31.92	73.61	6.05	20.83	6.36	2.78	2.78	356.25	58.72
2002[c]	36.00	14.05	169.33	40.55	9.33	1.33	6.67	2.67	1.33	1.33	221.33	45.39
2001[c]	12.00	2.31	246.67	53.53	26.67	10.67	4.00	2.31	0.00		289.33	64.18
2000[c]	37.33	5.81	224.00	20.53	2.67	1.33	5.33	3.53	0.00		269.33	25.33
1999[c]	n/d		165.33	8.74	17.33	5.35	4.00	2.31	1.33	1.33	186.67	14.11

[a] Lake drawn down for repairs in 2009

[b] Lake renovated in 2003

[c] Nocturnal sample

nw d4psd.d12

Table 45. Mean back calculated lengths (in) at each annulus for largemouth bass collected at Mauzy Lake in April 2012.

Year		Age				
class	No.	1	2	3	4	5
2011	9	6.0				
2010	50	6.0	9.4			
2009	1	8.8	12.6	13.6		
2008	5	7.0	9.7	11.9	14.1	
2007	1	6.4	9.0	10.7	13.2	14.5
Mean		6.1	9.5	12.0	13.9	14.5
No.		66	57	7	6	1
Smallest		3.2	6.5	9.9	13.0	14.5
Largest		9.8	12.6	14.0	15.6	14.5
Std error		0.2	0.2	0.6	0.4	
95% CI (±)		0.5	0.5	1.5	0.8	

nw d4lmba.d12

Table 46. Age-frequency and CPUE (fish/hr) per inch class of largemouth bass collected in 1.0 hour of electrofishing runs at Mauzy Lake during April 2012.

	Inch class																
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	No.	CPUE	Std. error	Age (%)
1	1	31	33	9										74	41.67	9.05	31.1
2				4	18	14	11	8	9	3				67	67.33	6.22	49.6
3											1			1	1.25	0.25	0.7
4											4	6	9	19	18.75	3.12	14.1
5												6		6	6.00	1.41	4.4
Total	1	31	33	13	18	14	11	8	9	3	5	12	9	167			
(%)	<0.1	18.6	19.8	7.8	10.8	8.4	6.6	4.8	5.4	1.8	3.0	7.2	5.4				100

nw d4psd.d12, nw d4lmba.d12

Table 47. Population assessment for largemouth bass based on spring electrofishing at Mauzy Lake from 2001-2012 (scoring based on statewide assessment).

Year	Mean length age 3 at capture	CPUE age 1	CPUE 12.0-14.9 in	CPUE ≥ 15.0 in	CPUE ≥ 20.0 in	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2012	13.6 (4)[a]	74.00 (3)	20.00 (2)	40.00 (4)	15.00 (4)	0.965	61.9	17	Excellent
2011		61.33 (3)	56.67 (4)	40.00 (4)	10.67 (4)				
2010			21.33 (2)	44.00 (4)	17.33 (4)				
2009[b]									
2008	12.2 (4)	99.00 (4)	21.00 (2)	83.00 (4)	7.00 (4)	0.466	37.3	18	Excellent
2007	12.2 (4)	21.00 (2)	40.00 (3)	64.00 (4)	0.00 (0)	0.374	31.2	13	Good
2006	10.3 (2)	24.00 (2)	24.00 (2)	60.00 (4)	0.00 (0)	0.755	53.0	10	Fair
2005	10.3 (2)	34.00 (2)	147.00 (4)	21.00 (3)	4.00 (4)			15	Good
2004	10.3 (2)	2.67 (1)	5.33 (1)	6.67 (2)	0.00 (0)	0.884	58.7	6	Poor
2003[c]	10.3 (2)	86.81 (4)	73.61 (4)	20.83 (3)	2.78 (3)			16	Good
2002	10.3 (2)	25.33 (2)	9.33 (1)	6.67 (2)	1.33 (2)			9	Fair
2001	10.3 (2)	5.33 (1)	26.67 (2)	4.00 (2)	0.00 (0)			7	Poor

[a] Only one age 3 fish

[b] Lake drawn down for repairs in 2009

[c] Lake renovated in 2003

Table 48. Length frequency and CPUE (fish/hr) for bluegill and redear sunfish collected during 1.0 hour of electrofishing at Mauzy Lake in May 2012.

	Inch class											
Species	1	2	3	4	5	6	7	8	9	Total	CPUE	Std. error
Bluegill	2	21	109	252	192	36	19			631	631.00	126.68
Redear sunfish			1	8	98	30	9	31	2	179	179.00	21.85

nw d4bg.d12

Table 49. Spring electrofishing CPUE (fish/hr) for each length group of bluegill (2000 - 2012) and redear sunfish (2007 - 2012) collected at Mauzy Lake during spring samples.

Bluegill	Length group											
	<3.0 in		3.0-5.9 in		6.0-7.9 in		≥8.0 in		≥10.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	23.00	7.77	553.00	108.46	55.00	14.30	0.00		0.00		631.00	126.68
2011	182.40	72.86	726.40	144.08	216.00	51.35	121.60	43.33	0.00		1246.40	195.02
2010	238.40	76.54	280.00	41.03	97.60	33.98	0.00		0.00		616.00	74.40
2009[a]												
2008[a]												
2007	101.33	11.06	621.33	39.61	38.67	8.86	0.00		0.00		761.33	44.51
2006	96.00	27.90	614.00	137.73	10.00	7.57	0.00		0.00		720.00	163.43
2005	289.74	45.54	596.15	101.27	14.10	5.76	0.00		0.00		900.00	86.60
2004	101.10	18.03	84.62	17.53	64.84	11.97	1.10	1.10	0.00		251.65	36.11
2003[b]												
2002	9.33	3.53	94.67	19.64	125.33	29.24	1.33	1.33	0.00		230.67	48.02
2001	5.33	3.53	65.33	16.22	137.33	27.94	1.33	1.33	0.00		209.33	40.68
2000	1.33	1.33	52.00	4.00	73.33	5.33	4.00	2.31	0.00		130.67	10.91

nw d4bg.d12

Redear	Length group											
	<3.0 in		3.0-5.9 in		6.0-7.9 in		≥8.0 in		≥10.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	0.00		107.00	13.69	39.00	7.63	33.00	8.61	0.00		179.00	21.85
2011	3.20	1.96	8.00	6.20	32.00	32.00	35.20	26.36	0.00		78.40	65.31
2010	0.00		16.00	10.12	240.00	48.33	14.40	7.33	0.00		270.40	61.00
2009[a]												
2008[a]												
2007	2.67	1.69	41.33	13.13	14.67	3.82	6.67	5.23	0.00		65.33	12.64

[a] Lake drawn down for repairs in 2008-2009

[b] Lake renovated in 2003

nw d4bg.d12

Table 50. Mean back calculated lengths (in) at each annulus for bluegill collected at Lake Mauzy in May 2012.

Year		Age							
class	No.	1	2	3	4	5	6	7	8
2010	17	2.6	3.8						
2009	19	2.1	4.7	5.4					
2007	5	2.2	3.7	4.9	6.2	6.5			
2006	4	1.8	3.8	5.0	6.1	6.7	7.0		
2005	4	2.0	3.2	4.4	5.2	5.7	6.6	6.9	
2004	1	2.9	3.7	4.4	5.1	5.8	6.4	7.4	7.6
Mean		2.2	4.1	5.1	5.8	6.3	6.7	7.0	7.6
No.		50	50	33	14	14	9	5	1
Smallest		1.3	2.7	3.9	4.9	5.4	6.0	6.4	7.6
Largest		4.0	5.3	6.2	6.7	7.1	7.3	7.4	7.6
Std error		0.1	0.1	0.1	0.2	0.1	0.1	0.2	
95% CI (±)		0.1	0.2	0.2	0.3	0.3	0.2	0.3	

nw d4bga.d12

Table 51. Age-frequency and CPUE (fish/hr) per inch class of bluegill collected at Lake Mauzy during May 2012.

	Inch class								
Age	3	4	5	6	7	No.	CPUE	Std. error	Age (%)
1						0	0.00		0.0
2	109	189				298	298.00	59.60	49.0
3		63	192	17		272	272.00	54.31	44.7
4						0	0.00		0.0
5				11	3	14	14.00	3.61	2.3
6				6	5	11	11.00	2.91	1.8
7				3	8	11	11.00	3.15	1.8
8					3	3	3.00	0.89	0.5
Total	109	252	192	37	19	609			
(%)	17.9	41.4	31.6	6.1	3.1				100

nw d4bg.d12, nw d4bga.d12

Table 52. Population assessment for bluegill based on spring electrofishing at Mauzy Lake from 2001-2012 (scoring based on statewide assessment).

Year	Mean length age 2 at capture	Years to 6.0 in	CPUE ≥ 6.0 in	CPUE ≥ 8.0 in	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2012	4.0 (2)	4-4+ (2)	55.00 (3)	0.00 (0)	0.884	58.7	7	Fair
2011			337.60 (4)	121.60 (4)				
2010			97.60 (4)	0.00 (0)				
2009[a]								
2008[a]								
2007	3.3 (1)	4-4+ (2)	38.67 (2)	0.00 (0)	0.642	35.8	5	Poor
2006	3.7 (2)	4-4+ (2)	10.00 (1)	0.00 (0)	0.755	53.0	5	Poor
2005	4.3 (2)	2-2+ (4)	14.10 (1)	0.00 (0)			7	Fair
2004	4.3 (2)	2-2+ (4)	65.94 (3)	1.10 (2)			11	Good
2003[b]								
2002	4.3 (2)	2-2+ (4)	126.66 (4)	1.33 (2)			12	Good
2001	4.3 (2)	2-2+ (4)	138.66 (4)	1.33 (2)			12	Good

[a] Lake drawn down for repairs in 2009

[b] Lake renovated in 2003

Table 53. Mean back calculated lengths (in) at each annulus for redear sunfish collected at Lake Mauzy in May 2012.

Year class	No.	Age 1	2	3	4	5	6
2011	1	3.6					
2010	27	3.4	5.3				
2009	5	3.3	6.4	7.4			
2008	1	4.0	5.4	7.4	7.8		
2007	9	3.4	5.8	6.7	7.9	8.3	
2006	3	3.8	5.9	6.9	7.8	8.3	8.5
Mean		3.4	5.6	7.0	7.8	8.3	8.5
No.		46	45	18	13	12	3
Smallest		2.4	4.1	6.2	7.4	7.9	8.3
Largest		5.2	7.1	7.7	8.7	9.0	8.6
Std error		0.1	0.1	0.1	0.1	0.1	0.1
95% CI (±)		0.2	0.2	0.2	0.2	0.2	0.1

nw d4rea.d12

Table 54. Age-frequency and CPUE (fish/hr) per inch class of redear sunfish collected at Lake Mauzy during May 2012.

	Inch class										
Age	3	4	5	6	7	8	9	No.	CPUE	Std. error	Age (%)
1	1							1	1.00	1.00	0.5
2		8	98	30	1			137	137.00	15.38	76.5
3					5			5	5.00	1.77	2.8
4					1			1	1.00	0.35	0.5
5					2	21	2	25	25.00	6.59	14.0
6						10		10	10.00	2.64	5.6
Total	1	8	98	30	9	31	2	179			
(%)	0.5	4.5	54.7	16.7	5.2	17.3	1.1				100

nw d4bg.d12, nw d4rea.d12

Table 55. Population assessment for redear sunfish based on spring electrofishing at Mauzy Lake from 2007-2012 (scoring based on statewide assessment).

Year	Mean length age 3 at capture	Years to 8.0 in	CPUE ≥ 8.0 in	CPUE ≥ 10.0 in	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2012	7.6 (4)	4-4+ (3)	33.00 (4)	0.00 (0)			11	Good
2011			35.20 (4)	0.00 (0)				
2010			14.40 (3)	0.00 (0)				
2009[a]								
2008[a]								
2007	8.2 (4)	3-3+ (4)	6.67 (2)	0.00 (0)	0.790	54.6	10	Fair

[a] Lake drawn down for repairs in 2008-2009.

Table 56. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.75 hour of 15-minute diurnal electrofishing runs at Carpenter Lake in April 2012.

	Inch class																					
Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	Std. error
Largemouth bass	4	5		21	22	10	10	14	15	14	6	6	4	2	3	1			1	138	184.00	46.70

nw d5psd.d12

Table 57. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Carpenter Lake 1999-2012.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥ 20.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	40.00	16.65	74.67	15.03	46.67	7.42	22.67	12.72	1.33	1.33	184.00	46.70
2011	182.67	15.38	166.67	9.61	73.33	13.13	9.33	3.53	4.00	4.00	432.00	30.20
2010	73.33	19.37	198.67	39.62	10.67	5.81	12.00	4.62	2.67		294.67	34.74
2009	102.67	18.67	166.67	26.26	18.67	4.81	8.00	2.31	0.00		296.00	27.23
2008	136.00	17.66	229.00	28.82	9.00	2.52	11.00	4.12	1.00	1.00	385.00	50.32
2007	45.33	7.42	128.00	24.33	12.00	2.31	10.67	3.53	1.33		196.00	31.75
2006	97.33	12.00	134.67	8.74	24.00	1.33	9.33	2.31	0.00		265.33	55.44
2005	157.33	3.53	165.33	48.57	30.67	3.53	2.67	1.33	0.00		356.00	54.60
2004	80.00	16.65	128.00	28.00	22.67	3.53	21.33	8.74	2.67		252.00	47.72
2003	181.33	49.33	97.33	11.39	18.67	4.81	36.00	12.22	1.33		333.33	63.43
2002[a]	12.00	4.62	52.00	4.62	12.00	0.00	21.33	3.53	0.00		97.33	4.81
2001[a]	14.67	8.74	29.33	5.33	90.67	9.33	66.67	2.67	1.33		201.33	17.64
2000[a]	2.67	1.33	45.33	7.06	48.00	2.31	0.00				96.00	8.33
1999[a]	1.33	1.33	142.67	18.52	29.33	13.53	1.33	1.33			174.67	31.01

[a] Nocturnal sample

nw d5psd.d12

Table 58. Population assessment for largemouth bass based on spring electrofishing at Carpenter Lake from 2001-2012 (scoring based on statewide assessment).

Year	Mean length age 3 at capture	CPUE age 1	CPUE 12.0-14.9 in	CPUE ≥ 15.0 in	CPUE ≥ 20.0 in	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2012		12.00 (1)	46.67 (3)	22.67 (3)	1.33 (2)				
2011		182.67 (4)	73.33 (4)	9.33 (2)	4.00 (4)				
2010	10.1 (2)	72.00 (4)	10.67 (1)	12.00 (2)	2.67 (3)	0.438	35.5	12	Good
2009	10.3 (2)	97.87 (4)	18.67 (1)	8.00 (2)	0.00 (0)			9	Fair
2008	10.3 (2)	120.30 (4)	9.00 (1)	11.00 (2)	1.00 (2)	0.561	42.9	11	Good
2007	10.3 (2)	39.87 (2)	12.00 (1)	10.67 (2)	1.33 (2)	0.560	42.9	9	Fair
2006	11.6 (4)	78.67 (4)	24.00 (2)	9.33 (2)	0.00 (0)	1.160	68.7	12	Good
2005	11.6 (4)	132.00 (4)	30.67 (2)	2.67 (1)	0.00 (0)			11	Fair
2004	11.6 (4)	56.00 (4)	22.67 (2)	21.33 (3)	2.67 (3)	1.155	68.5	16	Good
2003	11.6 (4)	162.67 (4)	54.67 (4)	36.00 (4)	1.33 (2)	0.943	61.1	18	Excellent
2002	11.6 (4)	12.00 (1)	12.00 (1)	21.33 (3)	0.00 (0)			9	Fair
2001	11.6 (4)	8.00 (1)	90.67 (4)	66.67 (4)	1.33 (2)			15	Good

Table 59. Length frequency and CPUE (fish/hr) of bluegill and redear sunfish collected during 0.625 hour of electrofishing at Carpenter Lake in May 2012.

	Inch class										
Species	2	3	4	5	6	7	8	9	Total	CPUE	Std. error
Bluegill	1	7	40	43	66	26			183	292.80	49.74
Redear sunfish				5	21	5	3	1	35	56.00	25.17

nw d5bg.d12

Table 60. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Carpenter Lake during spring samples 1999-2012.

	Length group											
	< 3.0 in		3.0-5.9 in		6.0-7.9 in		≥8.0 in		≥10.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	1.60	1.60	144.00	31.90	147.20	22.29	0.00		0.00		292.80	49.74
2011	16.00	10.43	400.00	157.48	180.80	50.51	0.00		0.00		596.80	214.40
2010	10.67	6.42	100.00	18.56	101.33	19.01	0.00		0.00		212.00	30.76
2009	17.33	9.56	124.00	24.42	140.00	17.86	0.00		0.00		281.33	42.85
2008	0.00		88.00	18.76	150.00	50.74	0.00		0.00		238.00	68.54
2007	2.67	2.67	61.33	17.73	168.00	38.53	1.33	1.33	0.00		233.33	9.10
2006	1.33	1.33	57.33	10.00	102.67	12.12	0.00		0.00		161.33	21.31
2005	12.09	9.77	190.11	17.09	98.90	6.80	18.68	9.02	0.00		319.78	23.07
2004	12.31	4.62	26.15	7.13	46.15	11.41	1.54	1.54	0.00		86.15	20.41
2003	7.69	2.81	102.56	22.96	47.44	13.24	3.85	1.72	0.00		161.54	34.11
2002	2.30		8.05		17.24		1.15		0.00		28.74	0.00
2001			198.67	74.7	152.00	22.74	41.33	12.72	0.00		392.00	108.89
2000			4.00	2.31	10.67	4.81	12.00	6.11	0.00		26.67	9.61
1999			10.67	2.57	82.67	10.91	12.00	8.00	0.00		105.33	17.99

nw d5bg.d12

Table 61. Population assessment for bluegill based on spring electrofishing at Carpenter Lake from 2001-2012 (scoring based on statewide assessment).

Year	Mean length age 2+ at capture	Years to 6.0 in	CPUE ≥ 6.0 in	CPUE ≥ 8.0 in	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2012			147.20 (4)	0.00 (0)				
2011			180.80 (4)	0.00 (0)				
2010	4.9 (3)	3-3+ (3)	101.33 (4)	0.00 (0)	0.615	45.9	10	Fair
2009	4.6 (3)	3-3+ (3)	140.00 (4)	0.00 (0)			10	Fair
2008	4.6 (3)	3-3+ (3)	150.00 (4)	0.00 (0)	0.571	43.9	10	Fair
2007	4.6 (3)	3-3+ (3)	169.33 (4)	1.33 (2)	0.386	32.0	12	Good
2006	5.6 (4)	2-2+ (4)	84.61 (4)	0.00 (0)	1.657	80.9	12	Good
2005	5.6 (4)	2-2+ (4)	117.58 (4)	18.68 (4)			16	Excellent
2004	5.6 (4)	2-2+ (4)	47.69 (2)	1.54 (2)			12	Good
2003	5.6 (4)	2-2+ (4)	53.33 (3)	4.00 (2)	1.427	76.0	13	Good
2002	5.6 (4)	2-2+ (4)	18.39 (1)	1.15 (1)			10	Fair
2001			145.67 (4)	41.33 (4)				

Table 62. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.375 hour of 7.5-minute diurnal electrofishing runs at Washburn Lake in April 2012.

	Inch class																					
Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	Std. error
Largemouth bass	6	45	27	2	2	50	26	4	5		1				1			1	1	171	456.00	77.70

nw d8psd.d12

Table 63. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Washburn Lake* during spring samples 2001-2012.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	213.33	39.82	218.67	46.26	16.00	0.00	8.00	0.00	5.33	2.67	456.00	77.70
2011	205.33	44.86	133.33	35.28	2.67	2.67	5.33	2.67	0.00		346.67	78.56
2010	96.00	28.10	80.00	16.65	5.33	5.33	2.67	2.67	2.67	2.67	184.00	45.49
2009	104.00	60.04	82.67	39.82	0.00		10.67	5.33	0.00		197.33	104.34
2008	170.67	42.92	61.33	21.83	16.00	0.00	13.33	9.61	0.00		261.33	59.57
2007	133.33	35.28	80.00	4.62	16.00	4.62	21.33	9.61	0.00		250.67	30.75
2006	96.00	9.24	98.67	39.28	64.00	0.00	18.67	5.33	2.67	2.67	277.33	25.44
2005	43.59	11.18	146.15	16.01	28.21	5.13	2.56	2.56	2.56	2.56	220.51	25.25
2004	46.15	4.44	353.85	49.45	0.00		0.00		0.00		400.00	51.22
2003	123.08	33.53	438.46	49.45	0.00		0.00		0.00		561.54	52.36
2002	50.00		321.43		0.00		0.00		0.00		371.43	0.00
2001	260.00		8.00		0.00		0.00		0.00		268.00	0.00

* Washburn Lake renovated summer 1999 and restocked spring 2000

nw d8psd.d12

Table 64. Population assessment for largemouth bass based on spring electrofishing at Washburn Lake 2003-2012 (scoring based on statewide assessment).

Year	Mean length age 3 at capture	CPUE age 1	CPUE 12.0-14.9 in	CPUE ≥ 15.0 in	CPUE ≥ 20.0 in	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2012			16.00 (1)	8.00 (2)	5.33 (4)				
2011			2.67 (1)	5.33 (2)	0.00 (0)				
2010	10.7 (2)	96.00 (4)	5.33 (1)	0.00 (0)	0.00 (0)	0.819	55.9	7	Poor
2009	13.1 (4)	99.73 (4)	0.00 (0)	10.67 (2)	0.00 (0)			10	Fair
2008	13.1 (4)	165.87 (4)	16.00 (1)	13.33 (2)	0.00 (0)	1.117	67.3	11	Fair
2007	13.1 (4)	131.20 (4)	16.00 (1)	21.33 (3)	0.00 (0)	0.944	61.1	12	Good
2006	11.2 (3)	94.67 (4)	64.00 (4)	18.67 (3)	2.67 (3)	0.669	48.8	17	Excellent
2005	11.2 (3)	41.03 (3)	28.21 (2)	2.56 (1)	2.56 (3)			12	Good
2004	11.2 (3)	48.29 (3)	0.00 (0)	0.00 (0)	0.00 (0)			6	Poor
2003	11.2 (3)	131.62 (4)	0.00 (0)	0.00 (0)	0.00 (0)			7	Poor

Table 65. Length frequency and CPUE (fish/hr) for bluegill and redear sunfish collected in 0.50 hour of electrofishing at Washburn Lake in May 2012.

Species	Inch class 2	3	4	5	6	7	8	Total	CPUE	Std. error
Bluegill	15	33	40	6	5	27	11	137	274.00	49.14
Redear		4	7	3	1			15	30.00	11.02

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Table 66. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Washburn Lake* during spring samples 2001-2012.

	Length group											
	< 3.0 in		3.0-5.9 in		6.0-7.9 in		≥ 8.0 in		≥ 10.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	30.00	11.94	158.00	27.59	64.00	23.32	22.00	6.83	0.00		274.00	49.14
2011	24.00	10.73	93.33	16.48	33.33	10.41	5.33	2.67	0.00		156.00	19.57
2010	53.33	16.22	152.00	57.87	32.00	0.00	0.00		0.00		237.33	41.65
2009	60.00	15.14	80.00	19.04	138.00	10.00	0.00		0.00		278.00	20.75
2008	2.67	2.67	152.00	37.81	168.00	48.66	0.00		0.00		322.67	69.49
2007	58.67	14.11	245.33	37.05	40.00	12.22	0.00		0.00		344.00	54.45
2006	58.67	50.67	138.67	39.28	32.00	16.00	0.00		0.00		229.33	81.63
2005	161.54	31.87	155.77	18.94	9.62	3.68	0.00		0.00		326.92	39.29
2004	80.77	7.36	48.08	3.68	11.54	4.97	21.15	10.59	0.00		161.54	12.95
2003	7.69	3.14	71.15	12.71	113.46	39.89	0.00		0.00		192.31	39.85
2002			46.51		102.33		0.00		0.00		148.84	0.00
2001			28.00		64.00		4.00		0.00		96.00	0.00

* Washburn Lake renovated summer 1999 and restocked spring 2000

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Table 67. Population assessment for bluegill based on spring electrofishing at Washburn Lake 2003-2012 (scoring based on statewide assessment).

Year	Mean length age 2+ at capture	Years to 6.0 in	CPUE ≥ 6.0 in	CPUE ≥ 8.0 in	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2012			86.00 (4)	22.00 (4)				
2011			38.67 (2)	5.33 (2)				
2010			32.00 (2)	0.00 (0)				
2009	4.7 (3)	3-3+ (3)	138.00 (4)	0.00 (0)	0.599	45.1	10	Fair
2008	5.3 (4)	2-2+ (4)	168.00 (4)	0.00 (0)	2.046	87.1	12	Good
2007	5.3 (4)	2-2+ (4)	40.00 (2)	0.00 (0)	1.050	65.0	10	Good
2006	5.3 (4)	2-2+ (4)	32.00 (2)	0.00 (0)			10	Good
2005	5.4 (4)	2-2+ (4)	9.62 (1)	0.00 (0)			9	Fair
2004	5.4 (4)	2-2+ (4)	32.69 (2)	22.00 (4)			14	Excellent
2003	5.4 (4)	2-2+ (4)	118.00 (4)	0.00 (0)			12	Good

Table 68. Relative abundance, composition, and number per hour of fish observed during 1.50 hours of 30-minute scuba transects swam at Goose Lake (Peabody WMA) in June 2005-2012.

		Length groups						
Species	Year	5.0-8.0 in.	8.0-12.0 in.	12.0-15.0 in.	>15.0 in.	Total	No./hr	Std. error
Largemouth bass	2012	31	33	16	8	88	58.67	7.88
	2011*							
	2010	20	30	13	1	64	42.66	4.26
	2008	24	23	12	1	60	40.00	3.21
	2007	7	14	8	3	32	21.33	1.45
	2006	18	28	8	2	56	37.33	8.21
	2005	14	29	15	9	67	44.67	8.17

		Length groups						
		3.0-5.0 in.	5.0-8.0 in.	8.0-10.0 in.	> 10.0 in	Total	No./hr	Std error
Bluegill	2012	179	352	4	0	535	356.67	38.40
	2011*							
	2010	37	103	5	0	145	96.67	1.86
	2008	114	72	4	0	190	126.67	9.49
	2007	135	106	11	2	254	169.33	23.79
	2006	181	106	1	0	288	192.00	23.06
	2005	141	62	12	0	215	143.33	42.10
	2012	85	143	10	0	238	158.67	13.32
	2011*							
	2010	17	74	5	1	97	64.67	7.86
	2008	21	35	8	0	64	42.67	6.96
	2007	6	19	17	1	43	28.67	3.18
	2006	5	23	3	0	32	20.67	1.45
	2005	0	0	8	0	8	5.33	2.67

* Visibility too low to sample

Table 69. Relative abundance, composition, and number per hour of fish observed during 1.0 hour of 20-minute scuba transects swam at Musky Lake (Peabody WMA) in June 2005-2012.

		Length groups						
Species	Year	5.0-8.0 in.	8.0-12.0 in.	12.0-15.0 in.	>15.0 in.	Total	No./hr	Std. error
Largemouth bass	2012	23	25	10	10	68	68.00	1.76
	2011	26	26	12	12	76	76.00	4.48
	2010	31	28	20	7	86	86.00	8.19
	2007	13	26	18	2	59	59.00	5.17
	2006	27	44	26	13	110	110.00	8.00
	2005	9	26	18	7	60	60.00	

		Length groups						
		3.0-5.0 in.	5.0-8.0 in.	8.0-10.0 in	> 10.0	Total	No./hr	Std error
Bluegill	2012	177	299	47	4	527	527.00	23.97
	2011	160	275	17	0	452	452.00	74.62
	2010	153	476	8	0	637	637.00	105.27
	2007	431	91	8	2	532	532.00	22.81
	2006	320	125	10	0	455	455.00	7.84
	2005	91	55	13	0	159	159.00	
Redear sunfish	2012	46	143	57	12	258	258.00	23.86
	2011	14	49	20	3	86	86.00	7.53
	2010	44	91	25	6	166	166.00	28.47
	2007	7	41	12	4	64	64.00	1.76
	2006	17	44	18	2	81	81.00	6.56
	2005	33	38	15	0	86	86.00	

SOUTHWESTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Lake sampling conditions are summarized in Table 1.

Barren River Lake (10,000 acres)

Black Bass

Black bass were collected with diurnal electrofishing in mid-April; results are presented in Tables 2-5. Total largemouth bass catch rate (203.83 fish/hr) was the highest catch rate on record bolstered by higher than average numbers of all length groups. All largemouth bass length group catch rate objectives were met.

The bass population remains dominated by largemouth bass, accounting for 94% of the population with the remainder being spotted bass. Largemouth bass size structure indices (PSD=69 RSD_{15}=32) were similar to previous year averages. The spotted bass population continues to be low density (12.00 fish/hr), but high quality (PSD=79 RSD_{14}=31). The smallmouth bass population was poorly represented in samples with all fish coming from one area. The largemouth bass population assessment was again "Excellent".

Fall young of year diurnal sampling (Tables 6-7) suggested a moderate 2012 year class for largemouth bass. Overall age-0 largemouth CPUE (70.00 fish/hr) was very low compared to previous years; however, age-0 CPUE $\geq$ 5.0 in (32.67 fish/hr) was similar to previous years. Mean size for age-0 bass was 5.1 in and well above the average of previous years. Enhanced growth rate of age-0 largemouth bass is likely tied to density dependant growth.

Crappie

Trap netting for crappie resulted in the collection of 616 total crappie (324 black crappie and 292 white crappie) in 59 net-nights (Tables 8-14). The crappie population remains a nearly even mix of black and white crappie (41 % and 59%, respectively). The population is reflective of good 2010 and moderate 2011 year classes of white crappie. Black crappie reached harvestable size (9.0 in) in 3.5 years and 10.0 inches in 3.9 years (calculated from Von Bertalanffy equation FAST 3.0). White crappie reached harvestable size (9.0 inches) in 2.6 years and 10.0 inches in 3.1 years (calculated from Von Bertalanffy equation FAST 3.0). The assessment rating remained "Fair" for both black crappie and white crappie (Tables 12-13). The combined crappie assessment was "Fair" as it has been for many years (Table 14). The length-weight equations for black crappie (n=305) and white crappie (n=450) are:

$$\text{Black crappie } \text{Log}_{10}(\text{weight}) = -3.68580 + 3.43833 * \text{Log}_{10}(\text{Length})$$
$$\text{White crappie } \text{Log}_{10}(\text{weight}) = -4.05237 + 3.75490 * \text{Log}_{10}(\text{Length})$$

Four of the 6 management objectives were met for crappie: CPUE of $\geq$ 6.00 fish/nn for all crappie excluding age-0, CPUE of $\geq$ 3.00 fish/nn for $\geq$ 8.0 in crappie, maintain a total fall crappie CPUE of 7.00 fish/nn and mean length age-2 at capture of 9.8 in. The goal of CPUE age-1 > 4.00 fish/nn was not met (3.47 fish/nn) nor was age-0 CPUE of $\geq$ 1.00 fish/nn; however, age-0 CPUE has been a very inconsistent predictor of year class strength for crappie.

Hybrid Striped Bass/White bass

Results of experimental gillnetting for hybrid striped bass and white bass are presented in Tables 15-18. Incompatible data did not allow for assessment comparisons to previous years due to site and gear differences (net length and mesh sizes) from the white bass research project and site-sample timing

differences from pre-2003 district data. Using the statewide assessment, the hybrid fishery rated "Excellent". Analysis of year class strength with age-frequency data suggests consistent stocking contribution across years and unreliability of age-0 CPUE as predictor of year class strength. The length-weight equation for hybrid striped bass (n=110) is

$$\text{Hybrid striped bass } \text{Log}_{10}(\text{weight}) = -3.55694 + 3.18480 * \text{Log}_{10}(\text{Length})$$

and was similar to previous years.

Briggs Lake (18 acres)

Black Bass

Nocturnal electrofishing samples for largemouth bass were collected on 5 April (Tables 19-21). The largemouth bass catch rate (234.00 fish/hr) was slightly lower than the management goal of 300.00 fish/hr, and dipped significantly from the previous year (470 fish/hr). Total largemouth CPUE had been elevated the past 5 years with an average of 414.00 fish/hr from 2007-2011 compared to an average of 243.20 fish/hr from 2002-2006. The PSD (28) value was significantly higher due to two-fold drop in 8.0-11.0 in length group numbers. High density population parameters for largemouth bass are desired for accomplishing the sunfish management goals. Since the lake is managed for bluegill-redear sunfish, the bass population assessment table was not included.

Sunfish

The sunfish population was sampled by diurnal electrofishing on 18 May (Tables 22-27). Bluegill CPUE for fish ≥6.0 in (78.00 fish/hr) was below the management goal of 100.00 fish/hr (Table 19). The catch rate of bluegill ≥8.0 in (16.00 fish/hr) continued to dip from the high (52.80 fish/hr) noted in 2010, but was near the goal of 20.00 fish/hr. The bluegill population assessment was again "Excellent", similar to previous years.

CPUE of redear sunfish ≥8.0 in (6.00 fish/hr) and >10.0 in (2.00 fish/hr) were near management objectives (10.50 fish/hr and 1.80 fish/hr, respectively). The high CPUE of the 6.0-7.9 in length group (94.00 fish/hr) should lead to a quick return to elevated numbers of larger redear sunfish for 2013. Though the CPUE of the 3.0–5.9 in length group was seemingly high (58.00 fish/hr), this length group catch rate is enigmatic and historically not been a reliable indicator (good or bad) for future length group CPUE. The statewide redear sunfish population assessment downgraded the fishery to "Good" after 3 consecutive years with an "Excellent" rating.

Spurlington Lake (25 acres)

Sunfish

Results of bluegill and redear sunfish diurnal sampling on 10 May are shown in Tables 28-32. CPUE of bluegill ≥6.0 in (74.00 fish/hr) met the management objective (75.00 fish/hr). The catch rate of bluegill ≥8.0 in (14.00 fish/hr) met the objective (15.00 fish/hr). Catch rate of bluegill ≥6.0 in was similar to previous years (2004-2007; average 62.50 fish/hr) which was prior to coontail invasion of lake. Coontail coverage was much less in 2012 seemingly due to a persisting planktonic algal bloom that curtailed coontail encroachment after a chemically induced stand reduction in the summer of 2010. Catch rates for this length group had been elevated since 2008 with a 4-year average of 143.00 fish/hr. Catch rate of bluegill ≥8.0 in (14.00 fish/hr) remained similar to previous years. The catch rates of the smaller length groups (< 3 in = 150.00 fish/hr; 3.0 – 5.9 in=788.00 fish/hr) dropped from last year's all time highs (713.00 fish/hr; 1057.60 fish/hr) for these same length groups. Though bluegill size structure continued to fall (PSD = 9) due to higher numbers of smaller fish, larger length group catch rates have yet to persistently deviate from previous years.

The bluegill population assessment remained "Good" according to statewide assessment values. CPUE of redear sunfish dipped sharply in 2012 (34.00 fish/hr) from its pinnacle (113.60 fish/hr) in 2011 (Table 31). The exceptionally early and warm spring coupled with coontail stand reduction may have contributed to the four-fold drop in CPUE. Additionally, redear population sampling, especially for smaller length groups, has proved erratic in other small impoundments. Redear assessment was not compiled due to lack of suitable age data.

Marion County Lake (25 acres)

Black Bass

Largemouth bass sampling was not conducted due to weather and clarity issues from rainfall and an unusual algal bloom.

Sunfish

Diurnal electrofishing results for bluegill and redear sunfish are presented in Tables 33-41. All length groups dipped in CPUE from the previous year except the 3.0-5.9 in length group which doubled (213.00 fish/hr). Management objectives for larger length groups were not met. The bluegill population assessment slid to "Fair" due to the drop in large fish CPUE.

CPUE of redear sunfish (57.00 fish/hr) fell back to normal levels after last year's high (136.00 fish/hr). CPUE $\geq$ 8.0 in (48.00 fish/hr) likewise fell from last year (74.29 fish/hr), but still met the management objective of 25.00 fish/hr. The management objective for CPUE $\geq$ 10.0 in (3.00 fish/hr) was not met. The redear sunfish population assessment slipped to "Good" due to lack of $\geq$ 10.0 in fish.

Shanty Hollow Lake (136 acres)

Black Bass

Nocturnal bass sampling results are shown in Tables 42–46. Overall CPUE of largemouth bass (362.00 fish/hr) was up slightly due to an increase in CPUE of the 8.0-11.9 in length group (210.00 fish/hr). Size structure index (PSD = 25) was similar to previous years despite a slight drop. Poor recruitment to larger length classes (15.0-in plus) remains a mystery. Age-1 CPUE (79.00 fish/hr) was exceptional as was CPUE of 12.0-14.9 in fish (56.50 fish/hr). CPUE of $\geq$ 15.0 in fish (14.50 fish/hr) did meet the management objective (12.00 fish/hr), and remains chronically impaired despite seemingly good smaller length group CPUE's. The objective of $\geq$ 20.0 in (2.50 fish/hr) was not meet. The largemouth bass population assessment remained "Good". Chronic low water levels (6-12 ft reductions) from late-summer through fall may be overtaxing the forage base (bluegill) and not supplying enough larger prey items to support larger bass. Early-winter condition sampling (Table 46) revealed a relative weight value of 86 for fish $\geq$ 15.0 in (n=7), which was similar to last year (Wr=88).

Sunfish

Sunfish (bluegill and redear) sampling results are shown in Tables 47-52. Bluegill CPUE (704.80 fish/hr) jumped significantly from previous years due to an increased CPUE of smaller fish. Bluegill size structure remains poor (PSD = 12) and the bluegill population assessment stayed at a "Fair" rating. Larger length group management objectives ($\geq$ 6.0 in = 120.00 fish/hr; $\geq$ 8.0 in = 6.00 fish/hr) were not met and were well below desired values.

The redear sunfish population remains low density (CPUE = 40.00 fish/hr), but with good size structure (PSD = 56). One of 2 assessable population objectives (CPUE $\geq$ 8.0 in = 9.60 fish/hr) was met; no fish $\geq$ 10.0 in were noted.

Shanty Hollow Lake experiences notable water level fluctuations due to a leak. Water level fluctuations range from 2-12 feet below normal pool within a year depending on rainfall. Erratic population shifts in sunfish and bass whether due to heightened predation, spawning interruptions, etc., may be symptoms of these frequent water level changes.

Green River Lake (8,210 Acres)

Muskie

Diurnal muskellunge sampling was attempted multiple times with poor results that were not reflective of the current population (1 of 6 sampling attempts yielded "normal" results); therefore, no data is presented for this year.

Black Bass

Nocturnal black bass sampling (Tables 53-56) was conducted on the upper and lower sites of each lake arm (Green River and Robinson Creek) on May 9 and 10. Overall largemouth CPUE (144.67 fish/hr) was the highest seen since 1997 and was bolstered by a higher numbers of 15.0-in plus fish (best in 20 years) and persisting dominance of the strong 2004 year class. The Smith Ridge area (upper Robinson Creek) largemouth catch rate dipped to nearly half of the previous years and remains the lowest bass CPUE area. Low catch rates of <8.0-in bass suggests the 2008 year class will be poor. All other areas were similar to the previous year.

Largemouth bass size structure returned to more normal values (PSD = 57; RSD = 30; Table 55) with the strong 2004 and good 2007 year classes bolstering a better than average PSD. The population assessment for largemouth bass remained "Good", similar to most years (Table 56).

Spotted bass catch rates (68.00 fish/hr) increased slightly from last time data was able to be collected in 2009 (47.50 fish/hr) which was an all-time high catch rate for spotted bass. The spotted bass population characteristics (size structure, growth rates (Tables 53 and 55) and visible condition) remain exceptional. Historically, very few spotted bass exceeded 12.0 in; however, since alewife introduction in 2004, the spotted bass population has attained its best peak in 20 years (E. Cummins, personnel communication).

Fall YOY sampling (Tables 57-58) indicated a poor 2012 year class for both largemouth and spotted bass. Age-0 largemouth bass CPUE (16.50 fish/hr), mean length (4.2 in) and CPUE $\geq$ 5.0 in (5.00 fish/hr) of age-0 largemouth bass were well below average. Rapid rising and fluctuating lake levels may have compromised much of the early spawned production (lower numbers overall) and led to a higher contribution of later spawned fish (poorer growth). Age-0 spotted bass followed similar trends as largemouth, with fewer numbers and smaller-sized fish.

Crappie

Results from trap netting for white crappie are presented in Tables 59 - 62. The stronger year classes of 2005, 2008 and 2010 plus the moderate year class of 2007 have yielded a stable, but slower growing fishery. Age-2+ mean length (8.1 in) in 2012 was well below the management objective of 9.0 in. Since 2008, growth to age-2+ has hovered around 8.0 in; whereas, age-2+ crappie in previous years were typically 9.0-in or better. All other management objectives were met. The crappie population assessment remained "Fair" due to high CPUE's of age-1 and older year classes which eclipsed management objectives of 12.00 fish/nn (CPUE of > age-0) and 7.00 fish/nn (CPUE of $\geq$ 8.0-in fish). The length-weight equation for white crappie in 2012 was:

$$\text{Log}_{10}\,(\text{weight}) = -3.82468 + 3.54573 \times \text{Log}\,(\text{length})$$

Walleye/White bass

Results of the experimental gill net sampling for white bass and walleye are shown in Tables 63-68. White bass CPUE (2.35 f/nn) was similar to the previous year (2.42 fish/nn). Some reproduction seemed to occur in 2012 as 8 age-0 white bass were collected which seems a representation considering the number stocked (629). Stocking success of the 2011 year class (104,000 fingerlings, 3.92 million fry)) appeared marginal as the 2010 year class (127,000 fingerlings, 2.5 million fry) was better represented (two-fold) in gillnet samples despite being fully recruited to the gear and only being stocked at a slightly less density (20% less) than 2010 year class. Unlike white crappie, age-0 white bass CPUE has been a reliable indicator of year class strength in Green River Lake historically. Age-0 CPUE in 2011 was low and reflective of the low catch rate experienced at age-1+. Age-2+ white bass averaged 14.9 inches in length, similar to previous age data prior to the die off of 2008. The length-weight equation for white bass is:

$$\text{Log}_{10}\,(\text{weight}) = -3.35228 + 3.02939 \times \text{Log}_{10}\,(\text{length})$$

The overall walleye CPUE (3.50 fish/nn) rose slightly due to the contribution of the 2011 year class (age-1+ fish). Walleye growth rate remains excellent with fish reaching 19.2 in by age-2+ . The walleye population assessment returned to "Good" standing. The length-weight equation for walleye is:

$$\text{Log}_{10}\,(\text{weight}) = -3.68270 + 3.20306 \times \text{Log}_{10}\,(\text{length})$$

which is similar to previous years.

West Fork Drakes (88 acres)

Black Bass

Bass sampling results are in Tables 69-73. The bass population appears low density (192.00 fish/hr), but with fair size structure (PSD 29) similar to previous samples. Truncated length frequency after 12.0 in suggests moderate harvest and/or fishing pressure. The lake is located just outside of Franklin, KY and receives decent fishing pressure. The lake is a shallow river-run system with good productivity and immense shallow cover or nursery areas. Bass achieved 11.3 in at age-3 which is decent growth for a smaller impoundment.

Sunfish

The sunfish sampling results are presented in Tables 74-79. Bluegill length group catch rates (3.0-5.9 in = 264.00 fish/hr; 6.0-7.9 in = 90.00 fish/hr) were lower than previous years, but still retained a "Fair" assessment despite the lack of fish $\geq$ 8.0 in.

The redear sunfish length group catch rates remained very good (3.0-5.9 in = 92.00 fish/hr; 6.0-7.9 in = 104.00 fish/hr), despite being 5 years removed from the last stocking in 2007; however, no fish were collected over 8.0 inches in length. Due to a seeming lack of larger fish ($\geq$ 8.0 in), the redear sunfish assessment for the lake was "Poor".

Table 1. Lake sampling conditions in the Southwestern Fisheries District in 2012.

Lake	Date	Species	Weather	Surface w ater temp.(F)	Conductivity (umhos)	Secchi (in.)	Comments
Barren River	4/12,17,19	Bass	Partly cloudy	61-70	180-190	14-50	10-12 -ft below summer pool
	9/24,26; 10/25; 11/1	YOY bass		54-75	210-225	34-48	1-8 ft below summer pool
	10/17-19; 11/1-2	Crappie		54-64		30	2-8 ft below summer pool & falling 0.4-ft. per day
	12/4 & 5	Morones		51-52			18-19 ft. below summer pool
Green River	3/6 & 7	Muskie		45-49		8-28	w inter pool
	3/13	Muskie		56-62	sunny		w inter pool
	4/9 & 10	Bass	clear/calm	64-67	110	36-72	summer pool & steady
	10/2,8,11	YOY bass		63-69	130-150	36-42	summer pool
	11/8 & 9, 14 & 15	Crappie		54-55		30-45	summer pool & falling slightly
	12/12	Walleye-White bass		47-50			4-ft below summer pool & falling 1-ft per day
Briggs	4/5	Bass	Cloudy & cool	71	210	63	Normal
	4/18	Bluegill & redear	Sunny/breezy	66-70	160-175		Nomal
Marion Co.	4/10	Bluegill & redear	Partly cloudy	65		42	Normal
Spurlington	4/10	Bluegill	Sunny	67		36-48	Normal
Shanty Hollow	4/3	Bass	Clear	76	110	55-62	Normal
	4/30	Bluegill & redear	Mostly sunny	76		18	Normal
	10/23	Bass W_r	Partly cloudy	63	120	26	
Fagan Branch	2/7	Trout		46-47			Normal
	3/1	Trout	Clear	51		65	Normal
	4/26	Trout	Clear/w indy	65-67		80	Normal
	11/29	Bass & Trout W_r	Cloudy	53		72	Normal
W. Fk. Drakes	4/25	Bass & bluegill	Sunny/breezy	62-66		28	Normal

Table 2. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 6.0 hours (12- 0.50-hour runs) of diurnal electrofishing at Barren River Lake in mid-April 2012.

		Inch class																				
Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	Std err
Peninsula	Smallmouth bass									1	2				1	1	1				6	4.00	3.06
	Spotted bass				1	3		4	4	3	13	6	8	7	3						52	34.67	11.39
	Largemouth bass			2	3	14	27	18	22	28	48	36	23	28	23	24	15	5	1		320	213.33	19.91
Beaver Creek	Smallmouth bass																				0	0.00	0.00
	Spotted bass						2	1	1												4	2.67	1.33
	Largemouth bass		2	1	1	12	18	8	30	63	58	31	32	27	11	10	7	6	2		319	212.67	27.86
Peter Creek	Smallmouth bass																				0	0.00	0.00
	Spotted bass	1						1		3	2	3	1	1	1						13	8.67	2.91
	Largemouth bass	1	1	4	17	10	3	6	11	19	29	17	19	23	23	17	18	6	2	3	229	152.67	24.91
Walnut Creek	Smallmouth bass																				0	0.00	0.00
	Spotted bass										2		1								3	2.00	2.00
	Largemouth bass	1	3	5	46	65	18	10	8	27	44	26	28	22	16	14	14	3	5		355	236.67	42.12
TOTAL	Smallmouth bass									1	2				1	1	1				6	1.00	0.83
	Spotted bass	1			1	3	2	5	5	7	17	9	10	8	4						72	12.00	4.77
	Largemouth bass	2	6	12	67	101	66	42	71	137	179	110	102	100	73	65	54	20	12	4	1223	203.83	15.81

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Table 3. Spring diurnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Barren River Lake during April, May and late-March since 1997.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
1997	6.67	1.40	31.11	5.23	48.40	6.44	49.30	6.48	3.33	0.67	135.60	11.61
1998	17.20	4.15	11.40	2.68	23.20	3.10	32.20	2.66	1.20	0.44	83.80	8.27
1999	10.67	2.40	31.33	5.62	41.67	6.90	36.33	4.66	2.33	0.64	120.80	11.16
2000	8.29	1.67	24.14	3.45	33.00	3.19	27.29	2.42	1.43	0.51	92.70	7.29
2001	11.81	1.64	42.29	4.02	49.33	6.34	61.90	4.10	1.14	0.40	165.30	9.60
2002	12.55	2.24	22.36	2.87	30.36	4.03	37.64	4.22	1.27	0.41	102.91	9.50
2003	21.69	3.42	22.46	3.47	20.46	2.90	39.54	4.71	0.31	0.21	104.15	10.58
2004	47.66	13.97	37.66	6.25	16.67	3.96	18.44	3.25	0.67	0.47	120.22	22.15
2005	17.67	2.93	66.00	7.73	31.50	4.65	36.83	3.36	2.00	0.68	152.00	8.62
2006	22.83	4.71	46.17	6.88	57.17	9.80	44.00	5.96	1.33	0.42	170.17	21.78
2007	12.67	3.09	44.17	10.94	37.67	5.00	37.17	5.84	1.00	0.58	131.67	17.03
2008	38.17	7.78	30.33	4.57	30.33	3.08	38.33	3.84	1.50	0.56	137.17	11.48
2009	14.67	4.07	25.67	2.37	18.83	2.32	23.17	3.90	1.33	0.57	82.33	9.80
2010	29.00	4.23	40.33	6.30	36.67	4.36	28.83	2.26	0.67	0.28	134.83	12.83
2011	no data due to flooding											
2012	31.33	8.98	52.67	7.34	65.17	7.03	54.67	5.57	2.67	0.57	203.83	15.81

sw dbrlbb.D97-D12

Table 4. Population assessment of largemouth bass based on spring sampling at Barren River Lake from 2002-2012 (scoring based on statewide assessment).

	2002		2003		2004		2005		2006		2007		2008		2009		2010		2012	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age-3 at capture	14.1	4	14.1	4	14.1	4	14.1	4	14.1	4	14.1	4	14.4	4	14.4	4	14.4	4	14.4	4
Spring CPUE age-1	13.67	1	26.90	2	44.90	3	11.20	1	17.50	1	18.00	1	13.79	1	18.92	2	35.73	3	43.75	3
Spring CPUE 12.0-14.9 in	30.36	3	20.46	2	16.67	2	31.50	3	57..17	4	37.67	4	30.33	3	18.83	2	36.67	4	65.17	4
Spring CPUE ≥15.0 in	37.64	4	39.54	4	18.44	3	36.83	4	44.00	4	37.17	4	38.33	4	23.17	4	28.83	4	54.67	4
Spring CPUE ≥20.0 in	1.27	2	0.31	2	0.67	2	2.00	2	1.33	2	1.00	2	1.50	2	1.33	2	0.67	2	2.67	3
Instantaneous Mortality (z)													-0.62							
Annual Mortality (A)%													46.2							
Total Score	14		14		14		14		15		15		14		14		17		18	
Assessment Rating	Good		Good		Good		Good		Good		Good		Good		Good		Excellent		Excellent	

sw dbrlbb.D02-D12

Table 5. PSD and RSD values obtained for each black bass species collected during 6.0 hours (12- 0.50-hour runs) of spring diurnal electrofishing at each area of Barren River Lake in April 2012. 95% confidence intervals are in parentheses.

Area	Species	No. ≥stock size	PSD	RSD[A]
Peninsula	Largemouth bass	301	68(11)	33(10)
	Spotted bass	51	78(23)	35(27)
	Smallmouth bass	*	*	*
Beaver Creek	Largemouth bass	303	61(11)	21(9)
	Spotted bass	*	*	*
	Smallmouth bass	*	*	*
Peter Creek	Largemouth bass	196	80(11)	47(14)
	Spotted bass	12	92(33)	*
	Smallmouth bass	*	*	*
Walnut Creek	Largemouth bass	235	73(11)	31(12)
	Spotted bass	*	*	*
	Smallmouth bass	*	*	*
Total	Largemouth bass	1035	69(6)	32(6)
	Spotted bass	70	79(19)	31(22)
	Smallmouth bass	*	*	*

[A] Largemouth bass = RSD_{15}, spotted bass and smallmouth bass = RSD_{14}.

* No fish of sufficient size w ere collected during sampling.

sw dbrlbb.d12

Table 6. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 6.0 hours (12- 0.50-hour runs) of diurnal electrofishing at Barren River Lake from late-Sepember to early-November 2012.

		Inch class																					
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE	Std err
Peninsula	Smallmouth bass		6	8		1															15	10.00	4.16
	Spotted bass		14	3	1	3	1	1	1	1	2	1		1							29	19.33	5.81
	Largemouth bass	3	26	11	4	4	4	3	7	8	8	6	11	12	5	5	1	1			119	79.33	4.67
Beaver Creek	Smallmouth bass																				0		
	Spotted bass			1								1									2	1.33	1.33
	Largemouth bass		2	15	12	13	17	18	10	18	41	33	50	24	15	6	6	5	3		288	192.00	40.51
Peter Creek	Smallmouth bass																				0		
	Spotted bass			2			1	1			3	2	1	1	2						13	8.67	2.67
	Largemouth bass	3	20	16	4	2	7	1	7	4	7	12	12	12	6	2	3	3		1	122	81.33	5.46
Walnut Creek	Smallmouth bass																				0		
	Spotted bass				2			1				1	1								5	3.33	0.67
	Largemouth bass	10	71	47	57	24	24	20	16	29	30	21	20	10	11	6	9	5	2	1	413	275.33	36.54
TOTAL	Smallmouth bass		6	8		1															15	2.50	1.58
	Spotted bass		14	6	3	3	2	3	1	1	5	5	2	2	2						49	8.17	2.53
	Largemouth bass	16	119	89	77	43	52	42	40	59	86	72	93	58	37	19	19	14	5	2	942	157.00	27.40

sw dbrlyy.D12

Table 7. Indices of year-class strength at age 0 and age 1 and mean length (in) of largemouth bass collected during diurnal fall electrofishing at Barren River Lake.

	Age 0[A]		Age 0[A]		Age 0 ≥5.0 in[A]		Age 1[B]	
Year-class	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2002	4.0	0.05	171.67	25.76	34.17	4.06	26.90	3.71
2003	4.4	0.04	198.00	30.81	84.00	18.74	44.90	13.25
2004	3.7	0.04	108.44	22.20	20.78	3.85	11.20	2.51
2005	3.7	0.04	160.67	25.63	25.33	4.20	17.50	3.63
2006	3.4	0.02	299.67	87.22	21.83	5.62	18.00	4.78
2007	4.2	0.06	61.50	12.80	14.00	2.47	13.79	1.49
2008	3.8	0.03	307.53	46.86	59.67	10.53	18.92	4.39
2009	3.2	0.02	401.32	76.11	36.83	8.59	35.73	5.18
2010	5.7	0.05	166.57	19.06	105.00	18.74	*	
2011	4.5	0.05	175.50	33.73	65.67	10.75	43.75	9.41
2012	5.1	0.08	70.00	16.72	32.67	11.00		

[A] Data collected by fall (September-October) diurnal electrofishing. Mean lengths were determined by analysis of otolith, removed from a subsample of LMB <9.0 in, and extrapolated to the entire catch of the fall sample.

[B] Data collected during the following spring (April/May) diurnal electrofishing sample.

sw dbrlbb.D02 - D12

sw dbrlag. D02 - D12

sw dbrlyy. D02 - D12

Table 8. Length frequency and CPUE (fish/nn) of each inch class of white and black crappie collected by trap net (60 net-nights) at Barren River Lake from mid-October and early-November 2012.

		Inch class												Std.
Location	Species	3	4	5	6	7	8	9	10	11	12	Total	CPUE	error
Beaver Creek														
	White crappie				18	29	50	112	145	24		378	12.60	2.83
	Black crappie			9	33	31	67	68	35	5	1	249	8.30	2.31
Walnut Creek														
	White crappie	3			3	8	16	33	13			76	2.53	0.91
	Black crappie	4	2	5	12	20	14	7	1	1		66	2.20	0.76
Total														
	White crappie	3			21	36	65	145	158	23		454	7.57	1.61
	Black crappie	4	2	14	45	51	81	75	36	6	2	315	5.25	1.27

swdbrltn.d12

Table 9. Proportional stock density (PSD) and relative stock density (RSD_{10}) of white and black crappie collected by trap nets (60 net-nights) at Barren River lake from mid-October and early-November 2012. Numbers in parentheses represent 95% confidence intervals

Location	Species	Number ≥5.0 in	PSD	RSD_{10}
Barren River Lake				
	White crappie	451	87(6)	40(9)
	Black crappie	309	64(11)	14(8)

swdbrltn.D12

Table 10. Age frequency and CPUE (fish/nn) of black crappie collected during 60 net-nights at Barren River Lake from mid-October and early November 2012.

	Inch class													Std.
Age	3	4	5	6	7	8	9	10	11	12	Total	Percent	CPUE	error
0	4	2	1								7	2	0.12	0.05
1			13	30	7		8	3			61	19	1.02	0.27
2				15	44	81	50	3	1	1	195	62	3.25	0.78
3							13	13			26	8	0.43	0.14
4							4	16	5		26	8	0.43	0.13
5										1	1	0	0.01	0.01
Total	4	2	14	45	51	81	75	36	6	2	315	100		
%	1	1	4	14	16	26	24	11	2	0	100			

2012 age file includes fish taken from hybrid striped bass gill nets in 2012
swdbrltn.d12; swdbrlag.d12

Table 11. Age frequency and CPUE (fish/nn) of white crappie collected during 60 net-nights at Barren River Lake from mid-October and early November 2012.

	Inch class												Std.
Age	3	4	5	6	7	8	9	10	11	Total	Percent	CPUE	Error
0	3									3	1	0.05	0.03
1				21	30	38	58			147	32	2.45	0.51
2					7	28	87	158	24	304	67	5.07	1.13
Total	3			21	37	66	145	158	24	454	100		
%	1			5	8	15	32	35	5	100			

2012 age file includes fish taken from hybrid striped bass gill nets in 2012
swdbrltn.d12; swdbrlag.d12

Table 12. Black crappie assessment from trap netting at Barren River Lake from 1985-2012 (scoring based on statewide assessment).

	Black crappie											
	CPUE excluding age 0		CPUE age 1		CPUE age 0		CPUE ≥8.0 in		Mean length age 2+ at capture			
Year	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Total score	Rating
1985	3.53	1	0.72	1	0.33	1	0.78	1	7.4	1	5	P
1986	10.72	2	6.94	3	3.83	2	2.80	2	8.7	2	11	F
1987	3.27	1	1.90	1	2.82	1	1.34	1	9.6	4	8	F
1988	6.18	2	5.68	2	0.10	1	0.44	1	9.3	3	9	F
1989	9.19	2	1.48	1	7.51	3	5.90	3	8.2	1	10	F
1990	29.12	4	26.11	4	0.10	1	1.92	1	8.8	2	12	F
1991	3.53	1	0.95	1	0.86	1	3.55	2	7.6	1	6	F
1992	9.20	2	3.49	2	0.07	1	4.24	2	7.7	1	8	F
1993	12.61	2	1.06	1	0.29	1	9.13	3	8.1	1	8	F
1994	0.74	1	0.10	1	0.82	1	0.70	1	8.8	2	6	P
1995	7.39	2	6.54	2	1.29	1	0.53	1	8.9	2	8	F
1996	9.03	2	0.79	1	0.48	1	4.16	2	7.8	1	7	P
1997	9.12	2	1.45	1	0.87	1	5.98	3	7.6	1	8	F
1998	1.71	1	0.12	1	1.79	1	1.56	1	8.2	1	5	P
1999	4.66	1	3.82	2	0.26	1	0.85	1	8.6	2	7	P
2000	1.81	1	0.18	1	0.22	1	0.65	1	7.8	1	5	P
2001	5.72	2	0.33	1	0.41	1	4.47	2	7.6	1	7	P
2002	4.58	1	1.02	1	3.09	2	3.34	2	8.7	2	8	F
2003	2.37	1	1.19	1	5.35	2	0.89	1	9.7	4	9	F
2004	6.90	2	4.36	2	0.65	1	2.20	2	9.2	3	10	F
2005*	6.40	2	2.30	1	2.00	1	4.40	2	9.1	3	9	F
2006*	2.70	1	1.40	1	0.60	1	1.30	1	8.9	3	7	P
2007	6.59	2	3.23	2	0.16	1	1.30	1	8.5	2	8	F
2008*	1.77	1	0.19	1	1.43	1	1.58	1	9.7	4	8	F
2009*	5.88	2	4.31	2	0.35	1	0.64	1	8.0	1	7	P
2010	5.65	2	1.44	1	0.83	1	3.60	2	8.7	2	8	F
2011	5.27	2	2.32	1	0.22	1	3.05	2	9.0	3	9	F
2012	5.15	2	1.02	1	0.10	1	3.32	2	8.3	2	8	F

* Age assessment data extrapolated from previous age data

sw dbrltn.D85 - D12

Table 13. White crappie assessment from trap netting at Barren River Lake from 1985 - 2012 (scoring based on statewide assessment).

	White crappie											
	CPUE excluding age 0		CPUE age 1		CPUE age 0		CPUE ≥8.0 in		Mean length age 2+ at capture			
Year	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Total score	Rating
1985	30.98	4	24.40	4	0.42	1	2.20	2	9.4	3	14	G
1986	13.56	3	3.61	2	1.91	1	8.87	3	9.0	2	11	F
1987	3.99	1	1.26	1	0.41	1	2.48	2	10.8	4	9	F
1988	3.07	1	2.49	1	0.24	1	2.48	2	11.1	4	9	F
1989	4.15	1	1.69	1	3.25	2	2.56	2	11.0	4	10	F
1990	22.83	4	20.80	4	0.50	1	13.38	4	10.8	4	17	G
1991	30.98	4	0.52	1	0.98	1	8.86	3	9.8	4	13	G
1992	6.82	2	5.09	2	0.07	1	4.04	2	11.5	4	11	F
1993	5.77	2	0.59	1	0.04	1	5.22	3	10.0	4	11	F
1994	0.66	1	0.11	1	0.65	1	0.44	1	10.6	4	8	F
1995	7.95	2	7.69	3	0.64	1	5.47	3	11.5	4	13	G
1996	6.34	2	0.80	1	1.40	1	5.59	3	9.7	4	11	F
1997	6.71	2	5.12	2	1.04	1	5.16	3	10.2	4	12	F
1998	1.22	1	0.68	1	2.03	1	0.93	1	10.9	4	8	F
1999	6.48	2	5.91	2	0.54	1	2.93	2	10.9	4	11	F
2000	2.50	1	0.32	1	0.03	1	2.38	2	9.3	3	8	F
2001	1.58	1	0.51	1	0.21	1	1.34	1	10.5	4	8	F
2002	1.41	1	0.29	1	1.16	1	0.80	1	10.7	4	8	F
2003	1.37	1	1.02	1	0.43	1	1.05	1	11.5	4	8	F
2004	1.55	1	0.88	1	0.16	1	1.29	1	11.1	4	8	F
2005*	0.70	1	0.60	1	0.01	1	0.70	1	11.0	4	8	F
2006*	0.30	1	0.20	1	0.00	0	0.20	1	10.6	4	7	P
2007	0.37	1	0.32	1	0.80	1	0.29	1	11.2	4	8	F
2008	0.03	1	0.01	1	0.18	1	0.03	1	10.8	4	8	F
2009*	4.44	1	4.03	2	0.02	1	3.95	2	10.2	4	10	F
2010	0.70	1	0.30	1	0.60	1	0.71	1	10.9	4	8	F
2011	4.71	1	4.45	2	0.24	1	2.76	2	10.9	4	10	F
2012	7.52	2	2.45	1	0.05	1	6.52	3	9.9	4	11	F

* Age Assessment data extrapolated from previous age data

sw dbrltn.D85 - D12

Table 14. Population assessment for all crappie from Barren River trap net data collected from 2001-2012 (scoring based on statewide assessment).

	2006		2007		2008		2009		2010		2011		2012	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Population Density (CPUE age-1 and older)	2.90	1	6.96	2	1.80	1	10.32	2	6.35	2	9.98	2	12.65	2
Recruitment (CPUE age-1)	1.60	1	3.58	2	0.20	1	8.34	3	1.74	1	6.77	2	3.47	2
Recruitment (CPUE age-0)	0.60	1	0.96	1	1.61	1	0.37	1	1.43	1	0.46	1	0.17	1
Size Structure (CPUE ≥8.0 in)	1.50	1	1.59	1	1.61	1	4.59	2	4.31	2	5.81	3	9.83	3
Grow th (Mean length age-2 at capture)	10.2	4	8.6	2	9.8	4	9.1	3	8.9	2	9.0	2	9.3	3
Instantaneous Mortality (Z)			-1.586											
Annual Mortality (A)%			79.9											
Total Score:		8		8		8		11		8		10		10
Assessment Rating:		Fair		Fair		Fair		Fair		Fair		Fair		Fair

sw dbrltn.D06 - D12

Table 15. Length frequency and CPUE (fish/nn) for white bass and hybrid striped bass collected by experimental gillnets (6 net-nights) from 04-06 December at Barren River Lake, KY 2012.

	Inch class																				
Species	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total	CPUE	Std. error
White bass		1				4	13	4	1										23	3.83	0.98
Blue catfish		1	2	2	7	2	1					1							16	2.67	0.95
Hybrid striped bass	1	4	14	2			9	26	4	3		4	12	11	21	11	4	3	129	21.50	5.77

sw dbrlgn.d12

Table 16. Hybrid striped bass population assessment from experimental gillnetting at Barren River Lake 2012 (scoring based on statewide assessment).

	CPUE age-1 and older		Mean length age-2+ at capture		CPUE ≥15.0 in		CPUE age-1		Mortality			
Year	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Instantaneous mortality (z)	Annual mortality (A)	Assessment	Rating
2012	18.00	3	18.4	4	12.17	4	7.00	3	-0.308	26.5	14	E

* minus age-0 fish

NA - catch data not amenable to mortality estimates

sw dbrlgn.d12

sw dbrlag.d12

Table 17. Relative weight (Wr) for each length group of hybrid striped bass collected by gill nets (6 net-nights) at Barren River Lake from December 4-6, 2012. Standard errors are in parentheses.

	Length group		
	8.0-11.9 in	12.0-14.9 in	≥15.0 in
Wr	86(1)	89(1)	89(1)
N	19	34	57

swdbrlgn.D12

Table 18. Age frequency and CPUE (fish/nn) of hybrid striped bass collected from experimental gillnets on December 4-6 at Barren River Lake, 2012.

	Inch class																					Std.
Age	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total	Percent	CPUE	error
0	1	4	14	2															21	16.0	3.50	1.61
1							8	26	4	3									41	31.0	6.75	2.47
2							2					4	7	4					16	12.0	2.67	0.85
3													5	7	11	3			26	20.0	4.29	1.51
4															4	6			10	8.0	1.62	0.68
5															4	3	1	2	9	7.0	1.58	0.54
6															2		3	2	7	5.0	1.10	0.30
Total	1	4	14	2			10	26	4	3		4	12	11	21	12	4	4	129	100.0		
%	1	3	11	2			7	20	3	2		3	9	9	16	9	3	2	100			

sw dbrlgn.D12, sw dbrlag.D12

Table 19. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 0.5 hours (4- 0.125 hour runs) of nocturnal electrofishing at Briggs Lake on 05 April 2012.

	Inch class																	Total	CPUE	Std err
Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			
Largemouth bass	4	13	3	1	17	21	16	15	17	6	1				1		1	1	117	234.00	12.38

sw dbrgbb.D12

Table 20. Spring nocturnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Briggs Lake during late-April to early May 2000-2012.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2000	27.94	8.10	92.63	19.12	64.71	12.01	10.29	2.82	NA		195.60	35.97
2001	120.59	21.57	73.53	10.87	41.18	9.30	5.88	4.16	1.47	1.47	241.00	24.96
2002	27.45	10.38	109.80	8.55	39.22	7.07	21.57	5.19	NA		202.00	17.48
2003	28.85	13.82	175.00	39.02	19.23	4.97	26.92	4.97	NA		260.00	51.07
2004	11.54	4.97	117.30	3.68	51.92	10.59	7.69	3.14	1.92	1.92	196.00	20.26
2005	46.00	6.83	194.00	21.26	28.00	5.16	26.00	5.03	6.00	3.83	294.00	27.40
2006	56.00	4.38	171.20	9.67	25.60	4.66	11.20	5.43	3.20	1.96	264.00	12.13
2007	38.00	6.83	412.00	32.41	18.00	2.00	2.00	2.00	NA		470.00	31.39
2008	154.00	16.12	286.00	19.70	36.00	6.93	14.00	6.83	8.00	5.66	490.00	30.88
2009	108.00	21.41	168.00	16.59	44.80	12.29	6.40	2.99	1.60	1.60	328.00	16.78
2010	34.00	10.52	236.00	29.66	32.00	8.00	10.00	5.03	NA		312.00	24.22
2011	132.00	14.79	308.00	20.00	24.00	3.27	6.00	3.83	4.00	2.31	470.00	11.49
2012	42.00	11.02	138.00	10.52	48.00	17.28	6.00	3.83	4.00	2.31	234.00	12.38

swdbrgbb.D00 - D12

Table 21. PSD and RSD_{15} values obtained for largemouth bass collected during 0.5 hours (4 - 0.125-hour runs) of spring nocturnal electrofishing at Briggs Lake on 05 April 2011. 95% confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD_{15}
Largemouth bass	96	28(9)	3(3)

swdbrgbb.D12

Table 22. Length frequency and CPUE (fish/hr) of bluegill and redear sunfish collected by diurnal electrofishing at Briggs Lake on 18 May 2012.

	Inch class													
Species	1	2	3	4	5	6	7	8	9	10	11	Total	CPUE	Std. error
Bluegill	5	23	24	30	25	16	15	7	1			146	292.00	53.72
Redear sunfish	1	1	1	3	25	28	19	1	1		1	81	162.00	49.89
Warmouth			2		4	5	9					20	40.00	23.32

swdbrgbg.D12

Table 23. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Briggs Lake from early-mid May 2005-2012. Standard errors are in parentheses.

	Length group				
Year	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	Total
2005	14.00	80.00	84.00	18.00	196.00
	(14.00)	(16.33)	(14.79)	(8.25)	(12.44)
2006	4.00	86.00	100.00	52.00	242.00
	(2.31)	(33.53)	(42.90)	(14.00)	(72.07)
2007	8.00	83.20	84.80	25.60	201.60
	(4.38)	(9.93)	(26.12)	(9.93)	(33.70)
2008	288.00	106.00	70.00	16.00	384.00
	(175.00)	(31.22)	(18.87)	(5.66)	(96.23)
2009	19.20	137.60	17.60	19.20	193.60
	(10.31)	(19.50)	(6.88)	(6.50)	(21.53)
2010	20.80	94.40	153.60	52.80	321.60
	(14.22)	(37.98)	(81.01)	(41.85)	(159.31)
2011	66.00	94.00	60.00	24.00	244.00
	(15.10)	(39.24)	(19.73)	(3.27)	(60.71)
2012	56.00	158.00	62.00	16.00	292.00
	(32.17)	(32.72)	(21.26)	(7.30)	(53.72)

sw dbrgbg.D05 - D12

Table 24. Spring electrofishing CPUE (fish/hr) for each length group of redear sunfish collected at Briggs Lake during early-mid May 2005-2012. Standard errors are in parentheses.

	Length group					
Year	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	≥10.0 in	Total
2005	*	14.00	2.00	4.00	*	20.00
		(8.87)	(2.00)	(4.00)		(6.93)
2006	4.00	2.00	70.00	22.00	2.00	98.00
	(2.31)	(2.00)	(8.25)	(6.00)	(2.00)	(10.52)
2007	*	8.00	62.40	12.80	1.60	83.20
		(3.60)	(13.00)	(6.50)	(1.60)	(16.90)
2008	1.60	3.20	*	4.00	*	8.00
	(1.60)	(1.96)		(2.31)		(3.58)
2009	1.60	8.00	54.40	17.60	4.80	81.60
	(1.60)	(6.20)	(14.84)	(11.97)	(3.20)	(25.10)
2010	*	9.60	16.00	17.60	1.60	43.20
		(3.92)	(7.16)	(9.60)	(1.60)	(19.86)
2011	*	4.00	14.00	28.00	12.00	46.00
		(4.00)	(2.00)	(10.58)	(4.00)	(14.38)
2012	4.00	58.00	94.00	6.00	2.00	162.00
	(2.31)	(19.15)	(33.05)	(3.83)	(2.00)	(49.89)

sw dbrgbg.D05 - D12

Table 25. Proportional stock density (PSD) and relative stock density (RSD) of bluegill and redear sunfish collected by diurnal electrofishing at Briggs lake on 18 May 2012. Numbers in parentheses represent 95% confidence intervals.

Species	N	PSD	RSD[A]
Bluegill	118	33(9)	7(5)
Redear sunfish	78	28(10)	3(3)

[A] Bluegill=RSD_8; redear sunfish=RSD_9

swdbrgbg.D12

Table 26. Bluegill population assessment for Briggs Lake 2006 - 2012 (scoring based on statewide assessment).

	Year													
	2006		2007		2008		2009		2010		2011		2012	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Growth Mean length age-2 at capture	4.9*	3	4.9	3	4.9*	3	4.9*	3	4.9*	3	4.9*	3	4.9*	3
Growth Years to 6.0 in	2.6*	4	2.6	4	2.6*	4	2.6*	4	2.6*	4	2.6*	4	2.6*	4
Size Structure CPUE ≥6.0 in	152.00	4	110.40	4	86.00	4	36.80	2	206.40	4	84.00	4	78.00	4
Size Structure CPUE ≥8.0 in	52.00	4	25.60	4	16.00	4	19.20	4	52.80	4	24.00	4	16.00	4
Instantaneous Mortality (z)			-0.53											
Annual Mortality (A)%			41.1											
Total Score:		15		15		15		13		15		15		15
Assessment Rating:		Excellent		Excellent		Excellent		Good		Excellent		Excellent		Excellent

*No age data collected, values carried over from 2007

sw dbrgbg.D06 - D12

Table 27. Redear population assessment for Briggs Lake 2006 - 2012 (scoring based on statewide assessment).

	Year													
	2006		2007		2008		2009		2010		2011		2012	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Growth Mean length age-3 at capture	8.6*	4	8.6	4	8.6*	4	8.6*	4	8.6*	4	8.6*	4	8.6*	4
Growth Years to 8.0 in	2.7*	4	2.7	4	2.7*	4	2.7*	4	2.7*	4	2.7*	4	2.7*	4
Size Structure CPUE ≥8.0 in	22.00	4	12.80	3	4.00	1	17.60	4	17.60	4	28.00	4	6.00	2
Size Structure CPUE ≥10.0 in	2.00	2	1.60	2	0.00	1	4.80	3	1.60	2	12.00	4	2.00	2
Instantaneous Mortality (z) Annual Mortality (A)%			NA											
Total Score:		14		13		10		15		14		16		12
Assessment Rating:		Excellent		Good		Fair		Excellent		Excellent		Excellent		Good

*No age data collected, values carried over from 2007

NA (age data not amenable to calculations)

sw dbrgbg.D06 - D12

Table 28. Length frequency and CPUE (fish/hr) of bluegill collected by diurnal electrofishing (4- 0.125-hour runs) at Spurlington Lake on 10 May 2012.

Species	Inch class								Total	CPUE	Std. error
	1	2	3	4	5	6	7	8			
Bluegill	8	67	205	150	39	21	9	7	506	1012.0	22.6
Redear			4			5	4	4	17	34.00	3.83
Warmouth		1	1	3	4	2	2		13	26.00	18.29

swdsplbg.d12

Table 29. Diurnal spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Spurlington Lake from 2005-2011. Standard errors are in parentheses.

Year	Length group				Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	>8.0 in	
2005	66.00	216.00	50.00	16.00	348.00
	(14.38)	(45.72)	(15.79)	(8.64)	(68.90)
2006	138.00	302.00	46.00	14.00	482.00
	(47.71)	(54.69)	(8.87)	(2.00)	(100.18)
2007	496.00	606.00	50.00	4.00	1156.00
	(85.23)	(73.49)	(18.29)	(4.00)	(137.39)
2008	198.00	550.00	120.00	14.00	882.00
	(38.42)	(145.60)	(43.20)	(14.00)	(236.25)
2009	246.40	571.20	156.80	14.40	988.80
	(37.64)	(82.78)	(30.21)	(7.76)	(119.60)
2010	310.00	468.00	100.00	2.00	880.00
	(134.00)	(75.72)	(42.14)	(2.00)	(195.70)
2011	713.60	1057.60	156.80	8.00	1936.00
	(111.09)	(187.33)	(54.41)	(3.58)	(256.10)
2012	150.00	788.00	60.00	14.00	1012.00
	(42.38)	(178.00)	(7.66)	(5.03)	(227.63)

sw dsplbg.D05 - D12

Table 30. Proportional stock density (PSD) and relative stock density (RSD) of bluegill and redear sunfish collected by diurnal electrofishing at Spurlington Lake on 10 May 2012. Numbers in parentheses represent 95% confidence intervals.

Species	N	PSD	RSD[A]
Bluegill	431	9(2)	2(1)
Redear	13	62(27)	*

[A] Bluegill=RSD_8; redear sunfish=RSD_9

* No fish of sufficient size were collected during sampling.

swdsplbg.d12

Table 31. Spring electrofishing CPUE (fish/hr) for each length group of redear sunfish collected at Spurlington Lake durng early-mid May 2009-2012. Standard errors are in parentheses.

	Length group					
Year	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	≥10.0 in	Total
2009	1.60 (1.60)	6.40 (2.99)	28.80 (12.55)	24.00 (11.03)	*	60.80 (22.43)
2010	24.00 (12.65)	18.00 (10.52)	10.00 (5.03)	12.00 (5.16)	*	64.00 (27.13)
2011	3.20 (3.20)	40.00 (10.12)	59.20 (22.57)	11.20 (9.33)	1.60 (1.60)	113.60 (34.26)
2012	*	8.00 (5.66)	18.00 (6.83)	8.00 (0.00)	*	34.00 (3.83)

swdsplbg.D09-12

Table 32. Bluegill population assessments from 2003 - 2012 at Spurlington Lake (scoring based on statewide assessment).

	Year																			
	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age-2 at capture	3.8*	2	3.8*	2	3.8*	2	3.8*	2	3.8*	2	3.8	2	3.8*	2	3.8*	2	3.8*	2	3.8*	3
Years to 6.0 in	3.2*	3	3.2*	3	3.2*	3	3.2*	3	3.2*	3	3.2	3	3.2*	3	3.2*	3	3.2*	3	3.2*	3
CPUE ≥6.0 in	58.67	3	70.00	3	66.00	3	60.00	3	54.00	3	134.00	4	171.20	4	102.00	4	164.80	4	74.00	3
CPUE ≥8.0 in	16.00	4	22.00	4	16.00	4	14.00	3	4.00	2	14.00	3	14.40	3	2.00	2	8.00	3	14.00	3
Instantaneous mortality (z)	ND		ND		ND		ND		ND		-1.091		ND		ND		ND		ND	
Annual mortality (A)											66.4									
Total Score:		12		12		12		11		10		12		12		11		12		12
Assessment rating		Good		Good		Good		Good		Fair		Good		Good		Good		Good		Good

ND - no age data collected

*No age data, values carried over from 2008 age data

sw dsplag.d08

sw dsplbg.D03 - D11

Table 33. Length frequency and CPUE (fish/hr) of each inch class of bluegill and redear sunfish collected by 1.0 hours of diurnal electrofishing (8- 450-second runs) at Marion Co. Lake on 10 May 2012.

	Inch class											Std.
Species	1	2	3	4	5	6	7	8	9	Total	CPUE	error
Bluegill	184	86	98	63	52	18	14	6	1	522	522.00	95.52
Redear sunfish		1		1	2	3	2	25	23	57	57.00	18.04

swdmclbg.D12

Table 34. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Marion Co. Lake. Standard errors are in parentheses.

Year	Length group				Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	>8.0 in	
2002	57.14	152.00	78.86	16.00	304.00
	(30.26)	(40.49)	(6.40)	(3.49)	(67.16)
2003	164.00	212.00	118.67	5.33	500.00
	(33.86)	(34.05)	(23.86)	(3.96)	(60.43)
2004	303.00	255.00	35.00	1.00	594.00
	(58.99)	(38.68)	(10.02)	(1.00)	(85.91)
2005	102.00	210.00	63.00	3.00	378.00
	(18.56)	(31.88)	(16.66)	(2.10)	(53.08)
2006	77.33	501.33	25.33	4.00	608.00
	(15.13)	(25.52)	(7.57)	(2.73)	(34.07)
2007	73.00	291.00	39.00	3.00	406.00
	(22.75)	(39.54)	(7.47)	(1.46)	(50.05)
2008	60.00	73.00	130.00	11.00	274.00
	(31.57)	(13.56)	(14.64)	(3.98)	(45.12)
2009	48.00	109.71	58.29	1.14	217.14
	(22.15)	(20.93)	(10.58)	(1.14)	(35.41)
2010	55.00	72.00	25.00	5.00	157.00
	(27.73)	(10.47)	(9.13)	(2.10)	(25.79)
2011	499.43	107.43	73.14	14.86	694.86
	(112.42)	(16.27)	(10.68)	(2.72)	(126.48)
2012	270.00	213.00	32.00	7.00	522.00
	(85.95)	(45.48)	(4.28)	(3.84)	(95.52)

sw dmclbg.D02 - D12

Table 35. Spring electrofishing CPUE (fish/hr) for each length group of redear sunfish collected at Marion Co. Lake. Standard errors are in parentheses.

	Length group					
Year	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	≥10.0 in	Total
2002	1.14	51.43	11.43	57.14	0.00	121.14
	(1.14)	(11.29)	(4.22)	(13.00)		(19.16)
2003	5.33	46.67	9.33	28.00	2.67	89.33
	(2.67)	(9.33)	(4.81)	(10.68)	(2.67)	(15.38)
2004	2.00	40.00	18.00	7.00	1.00	67.00
	(2.00)	(15.12)	(7.05)	(3.84)	(1.00)	(16.28)
2005	0.00	34.00	30.00	25.00	3.00	89.00
		(5.81)	(9.77)	(7.32)	(1.46)	(16.45)
2006	0.00	17.33	17.33	24.00	2.67	58.67
		(6.67)	(6.98)	(6.20)	(1.69)	(12.84)
2007	0.00	21.00	7.00	11.00	1.00	39.00
		(6.22)	(2.36)	(6.58)	(1.00)	(11.85)
2008	1.00	37.00	9.00	28.00	6.00	75.00
	(1.00)	(15.63)	(3.18)	(9.07)	(3.30)	(16.12)
2009	0.00	52.57	34.29	17.14	2.29	104.00
		(10.16)	(6.92)	(5.36)	(2.29)	(14.81)
2010	7.00	20.00	20.00	15.00	0.00	62.00
	(7.00)	(6.05)	(6.93)	(2.80)		(12.54)
2011	1.14	14.86	45.71	74.29	4.57	136.00
	(1.14)	(5.90)	(10.72)	(23.40)	(4.57)	(39.50)
2012	1.00	3.00	5.00	48.00	0.00	57.00
	(1.00)	(2.10)	(2.10)	(18.14)		(18.04)

sw dmclbg.D02 - D12

Table 36. Age frequency and CPUE (fish/hr) of bluegill collected during diurnal electrofishing at Marion Co. Lake 15 May 2007.

	Inch class											Std.
Age	1	2	3	4	5	6	7	8	Total	Percent	CPUE	error
1	184	60	10	6					260	50	260.00	86.16
2		26	88	50	42				206	40	206.00	42.25
3				6	10	9	5	1	31	6	32.00	5.96
4						7	4		11	2	11.00	1.80
5						2	4	1	7	1	7.00	0.74
6							1		1	0	1.00	0.49
7								3	3	1	3.00	1.46
8								1	1	0	1.00	0.49
9												
Total	184	86	98	62	52	18	14	6	520	100		
%	35	16	19	12	10	4	3	1	100			

swdmclbg.D12, swdmclag.D12

Table 37. Age frequency and CPUE of redear sunfish collected during diurnal electrofishing at Marion Co. Lake on 10 May 2012.

	Inch class								Std.
Age	5	6	7	8	9	Total	Percent	CPUE	error
1									
2	2	3				5	9	5.00	2.59
3			2	13		15	27	15.10	5.98
4				10	3	13	23	12.59	4.69
5				2	14	16	29	16.18	6.62
6					6	6	11	6.13	2.63
Total	2	3	2	25	23	55	100		
%	4	5	4	45	42	100			

swdmclbg.D12, swdmclag.D12

Table 38. Bluegill population assessments from 2002 - 2012 at Marion County Lake (scoring based on statewide assessment).

	Year																			
	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age-2 at capture	4.7*	3	4.7*	3	4.7*	3	4.7*	3	3.7	2	3.7*	2	3.7*	2	3.7*	2	3.7*	2	4.3	2
Years to 6.0 in	2.9*	4	2.9*	4	2.9*	4	2.9*	4	3.7	3	3.7*	3	3.7*	3	3.7*	3	3.7*	3	2.8	4
CPUE ≥6.0 in	124.00	4	36.00	2	67.00	3	29.33	2	42.00	2	141.00	4	59.43	3	30.00	2	88.00	4	39.00	2
CPUE ≥8.0 in	5.33	2	1.00	2	3.00	2	4.00	2	3.00	2	11.00	3	1.14	2	5.00	2	14.86	3	7.00	2
Instantaneous mortality (z)									-1.02706										-0.7458	
Annual mortality (A)									64.2										52.6	
Total Score:		13		11		12		11		9		12		10		9		12		10
Assessment rating		Good		Good		Good		Good		Fair		Good		Fair		Fair		Good		Fair

*No age data, values carried over from years with age data

sw dmclag.D02 & sw dmclag.D07

sw dmclbg.D02 - D12

Table 39. Redear sunfish population assessments from 2002 - 2012 at Marion County Lake (scoring based on statewide assessment).

	Year																			
	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age-3 at capture	8.3*	4	8.3*	4	8.3*	4	8.3*	4	8.3*	4	8.3*	4	8.3*	4	8.3*	4	8.3*	4	8.3	4
Years to 8.0 in	2.8*	4	2.8*	4	2.8*	4	2.8*	4	2.8*	4	2.8*	4	2.8*	4	2.8*	4	2.8*	4	2.8	4
CPUE ≥8.0 in	28.00	4	7.00	2	25.00	4	24.00	4	11.00	3	28.00	4	17.14	4	15.00	4	74.29	4	48.00	4
CPUE ≥10.0 in	2.67	2	1.00	1	3.00	2	2.67	2	1.00	1	6.00	4	2.29	2	0.00	0	4.57	3	0.00	0
Instantaneous mortality (z)									NA										NA	
Annual mortality (A)									NA										NA	
Total Score:		14		11		14		14		12		16		14		12		15		12
Assessment rating		Excellent		Good		Excellent		Excellent		Good		Excellent		Excellent		Good		Excellent		Good

*No age data or too little for calculation, values carried over from years w ith age data

NA (data not amenable to calculations)

sw dmclag.D02 & sw dmclag.D07

sw dmclbg.D02 - D12

Table 40. Proportional stock density (PSD) and relative stock density (RSD) of bluegill and redear sunfish collected by diurnal electrofishing at Marion Co. Lake on 10 May 2011. Numbers in parentheses represent 95% confidence intervals

Species	N	PSD	RSD[A]
Bluegill	252	15(3)	3(2)
Redear sunfish	56	89(8)	41(13)

[A] Bluegill=RSD_8; redear sunfish=RSD_9

swdmclbg.D12

Table 41. Redear sunfish population assessments from 2002 - 2012 at Marion County Lake (scoring based on statewide assessment).

	Year																			
	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age-3 at capture	6.5*	4	6.5*	4	6.5*	4	6.5*	4	7.7	4	7.7*	4	7.7*	4	7.7*	4	7.7*	4	7.7*	4
Years to 8.0 in	4.3*	3	4.3*	3	4.3*	3	4.3*	3	4.4	3	4.4*	3	4.4*	3	4.4*	3	4.4*	3	4.4*	3
CPUE ≥8.0 in	28.00	4	7.00	2	25.00	4	24.00	4	11.00	3	28.00	4	17.14	4	15.00	4	74.29	4	48.00	4
CPUE ≥10.0 in	2.67	3	1.00	2	3.00	3	2.67	3	1.00	2	6.00	4	2.29	2	0.00	1	4.57	3	0.00	1
Instantaneous mortality (z)									NA										NA	
Annual mortality (A)																				
Total Score:		14		11		14		14		12		15		13		12		14		12
Assessment rating		Excellent		Good		Excellent		Excellent		Good		Excellent		Good		Good		Excellent		Good

*No age data, values carried over from years w ith age data

NA (data not amenable to calculations)

sw dmclag.D02 & sw dmclag.D07

sw dmclbg.D02 - D12

Table 42. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass collected during 2.0 hours (8- 0.25-hour runs) of nocturnal electrofishing at Shanty Hollow Lake on 3 May 2012.

	Inch class																				
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE	Std err
Largemouth bass	9	54	69	25	5	31	181	114	97	70	29	14	8	7	7	2	3	2	724	362.00	13.79

sw dshlbb.D12

Table 43. Spring nocturnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Shanty Hollow Lake during mid-late April / May, 2001-2012.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in			
Year	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	Total CPUE	Std. error
2001	17.14	3.35	49.14	7.34	45.14	8.63	21.71	3.58	1.71	0.81	133.14	6.52
2002	20.00	4.09	52.00	7.95	69.71	6.16	16.00	2.62	1.14	0.74	157.71	11.07
2003	17.71	3.99	125.14	12.49	76.57	6.73	32.00	5.01	8.00	1.95	251.43	18.02
2004	19.43	3.64	133.71	9.67	36.57	4.97	24.00	2.76	3.43	0.57	213.71	16.99
2005	76.67	10.75	174.00	18.15	44.67	3.78	16.00	3.58	1.33	1.33	311.33	27.95
2006	86.00	15.76	214.67	11.44	30.00	3.06	11.33	3.78	5.33	1.98	342.00	26.66
2007	8.00	2.39	124.50	16.77	13.00	3.09	8.50	1.40	4.00	1.07	154.00	20.95
2008	30.00	6.89	204.50	13.45	57.50	4.72	5.50	1.50	1.00	0.65	297.50	12.28
2009	21.14	3.97	140.57	8.70	88.00	5.66	12.00	3.90	2.86	1.68	261.71	11.38
2010	26.00	5.24	165.00	12.44	74.50	4.66	11.50	2.67	1.50	0.73	277.00	15.34
2011	77.00	8.51	128.50	9.05	66.50	5.07	11.00	2.36	1.00	0.65	283.00	5.22
2012	81.00	11.43	210.00	11.41	56.50	4.81	14.50	2.38	1.00	0.65	362.00	13.79

sw dshlbb.D00 - D12

Table 44. PSD and RSD_{15} values from spring nocturnal electrofishing (2.0 hours; 8-0.25-hour runs) for largemouth bass at Shanty Hollow Lake on 3 May 2012. 95% confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD_{15}
Largemouth bass	562	25(4)	5(2)

swdshlbb.D12

Table 45. Population assessment of largemouth bass based on nocturnal spring sampling at Shanty Hollow Lake from 2002-2012 (scoring based on statewide criteria).

	Year																			
	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age-3 at capture	11.1*	3	11.4	3	11.4*	3	11.4*	3	11.4*	3	11.4*	3	12.1	4	12.1*	4	12.1*	4	12.1*	4
Spring CPUE age-1	17.71**	2	17.71	2	76.67**	4	86.00**	4	8.00**	1	25.00**	2	20.00	2	14.00**	1	77.50	4	79.00	4
Spring CPUE 12.0-14.9 in	76.57	4	36.57	3	44.67	3	30.00	2	13.00	1	57.50	4	88.00	4	74.50	4	66.50	4	56.50	4
Spring CPUE ≥15.0 in	32.00	4	24.00	3	16.00	2	11.33	2	8.50	2	5.50	2	12.00	2	11.50	2	11.00	2	14.50	2
Spring CPUE ≥20.0 in	8.00	4	3.43	3	1.33	2	5.33	4	4.00	4	1.00	2	2.86	3	1.50	2	1.00	2	1.00	2
Instantaneous Mortality (z)			-0.346										-0.6817							
Annual Mortality (A)%			29.3										49.4							
Total Score	17		14		14		15		11		13		15		13		16		16	
Assessment Rating	Excellent		Good		Good		Good		Fair		Good		Good		Good		Good		Good	

*No age data collected, value carried over from years with age data

**No spring age data, value calculated using age data from previous fall

***Only 1 netter used

ND = no age data collected

swdshlag.d04 & 09

swdshlbb.D02-D12

Table 46. Relative weight (Wr) for each length group of largemouth bass collected by diurnal electrofishing at Shanty Hollow Lake on 23 October 2012. Standard errors are in parentheses.

	Length group		
	8.0-11.9 in	12.0-14.9 in	≥15.0 in
Wr	83 (1)	82 (1)	86 (2)
N	112	33	7

swdshlwr.D12

Table 47. Length frequency and CPUE (fish/hr) of each inch class of bluegill and redear sunfish collected in 1.25 hours by diurnal electrofishing (10- 450-second runs) at Shanty Hollow Lake on 30 May 2012 .

Species	Inch class								Total	CPUE	Std. error
	1	2	3	4	5	6	7	8			
Bluegill	77	164	186	241	138	49	25	1	881	704.80	82.63
Redear sunfish		5	13	4	9	1	6	12	50	40.00	8.18

swdshlbg.D12

Table 48. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Shanty Hollow Lake from 2001 -2012. Standard errors are in parentheses.

Year	Length group				Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	>8.0 in	
2001	99.89	224.68	239.39	4.41	573.30
	(28.18)	(57.47)	(67.81)	(3.53)	(153.34)
2002	78.00	391.33	121.33	10.67	601.33
	(15.16)	(55.17)	(14.99)	(2.84)	(67.13)
2003	43.33	346.67	106.00	5.33	501.33
	(10.35)	(34.58)	(17.00)	(2.84)	(47.55)
2004	85.71	285.16	157.14		590.77
	(26.67)	(52.96)	(27.58)		(100.08)
2005	76.31	194.46	124.31	1.23	396.31
	(16.52)	(23.22)	(15.34)	(0.83)	(43.33)
2006	134.00	78.67	98.67	12.67	324.00
	(45.28)	(8.91)	(13.87)	(4.67)	(50.15)
2007	197.09	321.45	94.55	0.73	613.82
	(32.99)	(38.23)	(18.21)	(0.73)	(64.23)
2008	115.08	142.77	108.92	0.00	366.77
	(23.94)	(11.52)	(18.44)		(31.45)
2009	16.00	184.00	28.67	0.00	228.70
	(8.06)	(41.72)	(8.03)		(51.17)
2010	(66.00)	(181.33)	(29.33)	(0.67)	(277.33)
	(11.19)	(24.57)	(5.77)	(0.67)	(27.47)
2011			NO DATA		
2012	192.80	452.00	59.20	0.80	704.80
	(25.92)	(70.12)	(11.45)	(0.80)	(82.63)

sw dshlbg.D01 - D12

Table 49. Spring electrofishing CPUE (fish/hr) for each length group of redear sunfish collected at Shanty Hollow Lake from 2001 - 2012. Standard errors are in parentheses.

Year	Length group					Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	≥10.0 in	
2001	0	0.84 (0.84)	13.76 (5.31)	42.12 (8.69)	0.00	60 (8.29)
2002	0	3.33 (1.19)	6.67 (2.16)	6.67 (3.09)	0.00	16.67 (5.07)
2003	0	2.67 (1.14)	1.33 (0.90)	10.67 (6.02)	0.00	14.67 (5.89)
2004	1.23 (0.83)	8 (2.56)	8 (2.22)	9.85 (3.16)	0.00	27.08 (4.84)
2005	1.23 (1.23)	3.69 (1.46)	9.23 (2.69)	3.69 (1.46)	0.00	17.85 (3.75)
2006	0.00	8.00 (3.27)	6.00 (2.23)	8.67 (2.86)	0.00	22.67 (5.64)
2007	1.45 (0.98)	9.45 (2.82)	34.18 (6.39)	2.91 (1.22)	0.00	48.00 (7.32)
2008	1.23 (0.83)	3.08 (1.93)	9.23 (2.98)	11.69 (6.18)	0.00	25.23 (9.19)
2009	3.33 (2.08)	16.00 (3.55)	6.00 (3.95)	6.00 (3.70)	0.00	31.33 (9.21)
2010	0.00	12.67 (3.40)	8.67 (2.30)	2.00 (1.44)	0.00	23.33 (4.11)
2011			NO DATA			
2012	4.00 (2.15)	20.80 (5.62)	5.60 (2.40)	9.60 (3.11)	0.00	40.00 (8.18)

swdshlbg.D01 - D12

Table 50. Proportional stock density (PSD) and relative stock density (RSD) of bluegill and redear sunfish collected by diurnal electrofishing at Shanty Hollow Lake on 30 May 2012. Numbers in parentheses represent 95% confidence intervals

Species	N	PSD	RSD[A]
Bluegill	640	12(3)	0
Redear sunfish	32	56(17)	0

[A] Bluegill=RSD_8; redear sunfish=RSD_9

swdshlbg.D12

Table 51. Bluegill population assessments from 2002 - 2012 at Shanty Hollow Lake (scoring based on statewide assessment).

	Year																		
	2003		2004		2005		2006		2007		2008		2009		2010		2011	2012	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score		Value	Score
Mean length age-2 at capture	4.8	3	4.8	3	4.8	3	4.8	3	4.8	3	3.7	4	3.7	2	3.7	2	ND	3.7	2
Years to 6.0 in	2.6	4	2.6	4	2.6	4	2.6	4	2.6	4	2.7	4	2.7	4	2.7	4	ND	2.7	4
CPUE ≥6.0 in	111.33	4	157.14	4	125.54	4	111.34	4	95.27	4	108.9	4	28.67	2	30.00	2	ND	60.00	3
CPUE ≥8.0 in	5.33	2	0.00	0	1.23	2	12.67	3	0.73	2	0.00	0	0.00	0	0.67	1	ND	0.80	1
Instantaneous mortality (z)		ND		ND		ND		ND		ND	-0.753065			ND		ND	ND		ND
Annual mortality (A)											52.9								
Total Score:		13		11		13		14		13		12		8		9			10
Assessment rating		Good		Good		Good		Excellent		Good		Good		Fair		Fair			Fair

ND - no age data collected
sw dshlag.d02 & 08
sw dshlbg.D02 - D12

Table 52. Redear sunfish population assessments from 2002 - 2010 at Shanty Hollow Lake (scoring based on statewide assessment).

	Year																			
	2002		2003		2004		2005		2006		2007		2008		2009		2010		2012	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score		Score
Mean length age-3 at capture	7.2	4	7.2	4	7.2	4	7.2	4	7.2	4	7.2	4	7.8	4	7.8	4	7.8	4	7.8	4
Years to 8.0 in	3.9	4	3.9	4	3.9	4	3.9	4	3.9	4	3.9	4	3.7	4	3.7	4	3.7	4	3.7	4
CPUE ≥8.0 in	6.67	2	10.67	3	9.85	2	3.69	1	8.67	2	2.91	1	11.69	3	6.00	2	2.00	2	9.60	2
CPUE ≥10.0 in	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Instantaneous mortality (z)	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Annual mortality (A)																				
Total Score:		10		11		10		9		10		9		11		10		10		10
Assessment rating		Fair		Good		Fair		Fair		Fair		Fair		Good		Fair		Fair		Fair

ND - no age data collected or data not applicable for mortality estimates

sw dshlag.d02 & 08

sw dshlbg.D02 - D12

Table 53. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 6.0 hours (12- 0.50-hour runs) of nocturnal electrofishing at Green River Lake on 9-10 May 2012.

		Inch class																						
Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	Std err
Green River Arm																								
Holmes Bend	Smallmouth bass									2	2											4	2.67	1.33
	Spotted bass		4	2		1	4	9	17	6	4	3										50	33.33	8.67
	Largemouth bass		2	4	11	4	2	7	22	47	14	14	15	18	7	11	11	6	2			197	131.33	19.64
Ramp 1	Smallmouth bass	2	2	1			1	3	4		1	1										15	10.00	3.46
	Spotted bass			5	12	17	16	11	11	5	2	1	2	1		1						84	56.00	17.93
	Largemouth bass	1	10	19	13	8	20	40	36	26	25	18	16	11	19	11	7	10	2	1		293	195.33	11.68
Robinson Creek Arm																								
Smith Ridge	Smallmouth bass																					0		
	Spotted bass	1	2	2	3	6	16	18	7		1	1										57	38.00	6.11
	Largemouth bass	1	2	5	7	4	1	8	31	16	10	4	3	2	4	8	5	5	1			117	78.00	5.29
Lone Valley	Smallmouth bass	1	1				4	8	7	6	1	1	2	1		1						33	22.00	3.06
	Spotted bass		1	9	15	30	50	31	24	12	19	11	8	5								215	143.00	15.76
	Largemouth bass			1	5	2	1	13	24	35	42	20	31	35	18	16	11	5		1	1	261	174.00	36.07
TOTAL	Smallmouth bass	3	3	1			5	11	11	8	4	2	2	1		1						52	8.67	2.77
	Spotted bass	1	7	18	30	54	86	69	59	23	26	16	10	6		1						406	67.67	14.53
	Largemouth bass	2	14	29	36	18	24	68	113	124	91	56	65	66	48	46	34	26	5	2	2	868	144.67	16.34

sw dgrlbb.d12

Table 54. Spring diurnal electrofishing CPUE (fish/hr) of largemouth bass by length group collected at Green River Lake during early May since 1997.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
1997	3.67	1.04	22.33	2.46	23.33	2.82	23.17	2.10	1.17	0.46	72.50	5.18
1998	33.50	7.66	9.00	1.82	8.83	2.04	17.50	1.84	2.00	0.70	68.83	8.61
1999	21.38	3.76	53.54	7.18	19.38	4.00	14.31	1.66	2.77	0.77	108.62	12.51
2000	2.50	0.89	41.00	4.37	24.17	3.41	14.67	3.37	3.17	0.97	82.33	8.59
2001	10.17	2.50	26.67	2.99	32.17	6.45	12.50	1.50	1.67	0.41	81.50	7.77
2002	5.00	1.14	9.50	1.46	20.50	2.49	13.00	2.46	1.17	0.39	48.00	4.24
2003	5.83	1.38	12.33	2.07	5.83	1.78	18.17	2.96	1.83	0.67	42.17	4.12
2004	17.33	2.74	22.80	2.10	11.60	1.81	15.60	2.55	0.93	0.27	67.33	6.41
2005	67.83	7.98	30.67	2.78	11.67	1.86	16.83	2.52	1.50	0.66	127.00	12.53
2006	15.07	2.01	44.40	3.56	23.07	2.81	18.93	2.13	0.27	0.18	96.17	5.25
2007	3.83	1.03	20.50	2.51	33.67	5.78	22.17	3.61	0.50	0.26	80.17	10.33
2008	22.83	9.49	25.83	4.71	27.83	3.97	30.17	2.74	0.83	0.39	106.66	16.97
2009	7.17	1.78	11.33	3.38	13.00	2.70	42.83	7.94	1.67	0.77	74.33	12.29
2010	no data due to flooding											
2011	no data due to flooding											
2012	16.50	4.31	54.83	6.26	35.33	6.38	38.00	5.44	1.33	0.51	144.67	16.34

sw dgrlbb.D97-D12

Table 55. PSD and RSD values for each black bass species collected during 6.0 hours (12- 0.50-hour runs) of nocturnal electrofishing at each area of Green River Lake on May 9-10, 2012. 95% confidence intervals are in parentheses.

Area	Species	No. ≥stock size	PSD	RSD[A]
Green River Arm				
Holmes Bend	Largemouth bass	176	56(9)	31(7)
	Spotted bass	44	30(14)	
Ramp 1	Largemouth bass	242	50(6)	25(5)
	Spotted bass	67	18(9)	6(6)
Robinson Creek Arm				
Smith Ridge	Largemouth bass	98	43(10)	26(10)
	Spotted bass	49	4(5)	5(6)
Lone Valley	Largemouth bass	253	71(6)	34(6)
	Spotted bass	190	29(6)	7(3)
	Smallmouth bass	31	39(18)	
Total	Largemouth bass	769	57(5)	30(4)
	Spotted bass	350	23(4)	5(2)
	Smallmouth bass	45	40(14)	9(8)

[A] Largemouth bass = RSD_{15}, spotted bass and smallmouth bass = RSD_{14}.

sw dgrlbb.d12

Table 56. Population assessment of largemouth bass based on nocturnal spring sampling at Green River Lake from 2002-2012 (scoring based on statewide assessment).

	2002		2003		2004		2005		2006		2007		2008		2009		2012	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age-3 at capture	12.7	4	14.4	4	13.2	4	13.2	4	13.2	4	13.2	4	13.2	4	14.9	4	14.9	4
Spring CPUE age-1	4.67	1	7.25	1	11.87	1	65.33	4	14.33	1	3.83	1	22.83	2	7.17	1	15.50	1
Spring CPUE 12.0-14.9 in	20.50	2	5.83	1	11.60	1	11.67	1	23.07	2	33.67	3	27.83	2	13.00	1	35.33	4
Spring CPUE ≥15.0 in	13.00	3	18.17	4	15.60	3	16.83	2	18.93	3	22.17	4	30.17	4	42.83	4	39.33	4
Spring CPUE ≥20.0 in	1.27	2	1.83	3	0.93	2	1.50	2	0.27	1	0.50	2	0.83	2	1.67	3	1.33	2
Instantaneous Mortality (z)			-0.477												-0.610			
Annual Mortality (A)%			37.90												45.7			
Total Score	12		13		11		13		11		14		14		13		15	
Assessment Rating	Good		Good		Good		Good		Fair		Good		Good		Good		Good	

sw dgrlag.D03
sw dgrlbb.D02-D12

Table 57. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 6.0 hours (12- 0.50-hour runs) of diurnal electrofishing at Green River Lake in early-October 2012.

		Inch class																				
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE	Std err
Green River Arm																						
Homles Bend	Smallmouth bass					1					1									2	1.33	0.67
	Spotted bass	1	2	6	3	1	1	2				1								17	11.33	2.40
	Largemouth bass	5	23	4	3	2	1	3	4	1	3	1	2	2			1			55	36.67	10.73
Ramp 1	Smallmouth bass			1		1						1								3	2	1.15
	Spotted bass		2	1	1	1	3	1												9	6	1.15
	Largemouth bass		6	1			2	3	1	3	4	3	4	1	1	1			1	31	20.67	0.67
Robinson Creek Arm																						
Smith Ridge	Smallmouth bass				1															1	0.67	1.15
	Spotted bass		8	21	9		6	5	1	1	3			1						55	36.67	5.93
	Largemouth bass		7	14	19	9	5	2	3	2	3	2	1	6	2	1			1	77	51.33	6.77
Lone Valley	Smallmouth bass								1	1										2	1.33	0.67
	Spotted bass		2	1	1	1		1	3	4	1	4	2	3	1		1			25	16.67	1.33
	Largemouth bass	2	6	1	1	1		3	4	1	1	3	4		2	2				31	20.67	4.37
TOTAL	Smallmouth bass			1	1	2				1	2	1				1				9	1.5	0.44
	Spotted bass	1	14	29	14	3	10	9	4	5	4	5	2	4	1		1			106	17.67	3.77
	Largemouth bass	7	42	20	23	12	8	11	12	7	11	9	11	9	5	4	1		2	194	32.33	4.80

sw dgrlyy.d12

Table 58. Largemouth bass mean length (in) at age-0 and catch rates at age 0 and age 1 collected at Green River Lake since 2002.

	Age 0[A]		Age 0[A]		Age 0 ≥5.0 in[A]		Age 1[B]	
Year class	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2002	3.9	0.07	32.67	9.70	5.33	1.16	7.25	1.58
2003	3.9	0.08	32.83	9.69	5.50	1.23	11.87	2.09
2004	5.0	0.07	60.83	8.97	28.00	3.62	65.33	7.66
2005	5.2	0.09	31.67	7.44	16.83	4.33	14.33	2.36
2006	4.3	0.13	13.50	3.41	3.67	1.20	3.83	1.0
2007	4.2	0.11	21.83	5.31	5.83	2.18	22.83	9.49
2008	4.8	0.11	23.67	5.75	11.50	3.56	7.17	1.78
2009	3.7	0.05	66.83	9.82	11.50	3.85	ND	
2010	4.8	0.07	45	8.07	18.33	4.86	ND	
2011	3.9	0.08	28.83	7.51	5.83	1.53	15.50	4.04
2012	4.2	0.11	16.50	4.15	5.00	2.02		

[A] Data collected by fall (Sept/October) diurnal electrofishing. Mean lengths were determined by otolith taken from a subsample of LMB <9.0 inches and extrapolated to the entire catch of the fall sample.

[B] Data collected during the following spring (April/May) nocturnal electrofishing.

swdgrlbb.D02 - D12

swdgrlag. D02 - D12

swdgrlyy. D02 - D12

Table 59. Length frequency and CPUE (fish/nn) for each inch class of crappie collected by trap net (60 net-nights) at Green River Lake from November 8-9, 14-15 2012 .

	Inch class												Std.
Species	3	4	5	6	7	8	9	10	11	12	Total	CPUE	error
White crappie	2	5	18	350	208	166	209	105	30	5	1098	18.61	4.24
Black crappie				1	1		1				3	0.05	0.04

swdgrltn.d12

Table 60. Proportional stock density (PSD) and relative stock density (RSD_{10}) of white crappie collected by trap nets (60 net-nights) at Green River Lake from mid November 2012. Numbers in parentheses represent 95% confidence intervals.

Species	N	PSD	RSD_{10}
White crappie	1091	47(3)	13(2)

swdgrltn.D12

Table 61. White crappie assessment from trap net samples at Green River Lake from 1986 - 2012 (scoring based on statewide assessment).

	White crappie													
	CPUE excluding age 0		CPUE age 1		CPUE age 0		CPUE ≥8.0 in		Mean length age-2 at capture		Mortality			
Year	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Instantaneous (z)	Annual (A)	Assessment	Rating
1986	16.87	3	3.23	2	1.23	1	3.99	2	7.9	1	-0.911053	59.8	9	F
1987	15.43	3	4.06	2	19.16	4	5.16	3	8.1	1	-1.118361	67.3	13	G
1988	15.87	3	8.87	3	18.62	4	4.52	2	8.0	1	-0.854265	57.4	13	G
1989	26.30	4	20.24	4	1.29	1	6.38	3	9.6	4	-1.022316	64	16	G
1990	12.61	2	5.87	2	0.42	1	7.57	3	9.2	3	-0.924447	60.3	11	F
1991	8.68	2	2.93	2	6.88	2	6.15	3	9.3	3	-0.565581	43.2	12	F
1992	28.34	4	24.48	4	1.84	1	8.54	3	10.0	4	-0.9219538	70.4	16	G
1993	24.81	4	6.99	3	1.22	1	15.53	4	9.0	2	-0.949191	61.3	14	G
1994	8.65	2	2.47	1	11.78	3	6.08	3	9.3	3	-0.767229	53.6	12	F
1995	16.18	3	11.12	3	13.22	3	10.74	3	10.0	4	-1.055474	65.2	16	G
1996	13.36	3	6.51	2	3.17	2	5.96	2	9.2	3	-0.895818	59.2	12	F
1997	14.08	3	3.94	2	1.89	1	8.11	3	8.7	2	-1.121453	67.4	11	F
1998	9.21	2	2.48	1	3.78	2	8.01	3	9.3	3	-0.850455	57.3	11	F
1999	7.38	2	5.21	2	0.99	1	2.86	1	9.9	4	NA		10	F
2000	6.29	2	1.45	1	0.01	1	5.17	2	9.7	4	-0.824828	56.2	10	F
2001	4.27	1	0.15	1	10.78	3	4.17	2	9.5	3	-1.09953	66.7	10	F
2002	10.87	2	9.69	3	0.53	1	4.11	2	9.8	4	-0.759078	53.2	12	F
2003	12.95	3	5.08	2	3.30	2	6.80	3	9.1	3	-1.075599	65.9	13	G
2004	17.67	3	9.60	3	3.84	2	7.93	3	8.4	1	-1.53876	78.5	12	F
2005*	13.82	3	3.00	2	1.70	1	8.00	3	8.4	1	ND		10	F
2006	16.39	3	10.21	3	1.42	1	6.46	3	9.7	4	-1.090892	66.4	14	G
2007*	15.90	3	10.45	3	4.39	2	6.66	3	9.1	3	ND		14	G
2008	9.00	2	0.70	1	0.86	1	4.67	2	7.8	1	-0.728739	51.7	7	P
2009	20.05	3	4.12	2	0.89	1	9.67	3	7.9	1	ND		10	F
2010	17.78	3	0.67	1	1.27	1	11.08	4	7.8	1	-1.10117	66.8	10	F
2011	22.85	4	8.34	3	2.57	1	10.02	3	7.9	1	NA		12	F
2012	18.18	3	3.83	2	0.12	1	8.76	3	8.1	1	NA		10	F

* Age assessment data extrapolated from previous years age data

NA - catch data not amenable to mortality estimates

sw dgltn.D86 - D12

sw dgrlag.d86-12

Table 62. Age frequency and CPUE (fish/nn) of white crappie collected during 60 net-nights at Green River Lake during mid-November 2012.

	Inch class												Std.
Age	3	4	5	6	7	8	9	10	11	12	Total	Percent	CPUE	error
0	2	5									7	1.0	0.12	0.06
1			18	203	9						230	21.0	3.89	1.22
2				147	145	79	109	10			490	45.0	8.31	1.95
3					18	16	20	24			78	7.0	1.32	0.25
4					27	32	70	38	14	1	182	17.0	3.09	0.56
5					9	24		5	5	3	45	4.0	0.76	0.15
6							10	5	6		21	2.0	0.36	0.07
7						15		24	5	1	45	4.0	0.77	0.15
Total	2	5	18	350	208	166	209	105	30	5	1098			
%	0	0	2	32	19	15	19	10	3	0	100			

* 2012 age file includes fish taken from white bass gill nets in 2012

swdgrltn.d12; swdgrlag.d12

Table 63. Length frequency and CPUE (f/nn) for white bass and walleye collected by experimental gillnets (20 net-nights) on December 12-14 at Green River Lake, KY 2012.

	Inch class																		Std.
Species	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Total	CPUE	error
White bass	2	5	2	5	6	11	16											47	2.35	0.39
Walleye		2	4	2		1	5	7	14	10	6	7	7	2	1		1	69	3.45	0.64

swdgrlgn.d12

Table 64. Age frequency and CPUE (fish/nn) of walleye collected from experimental gillnets during mid-December at Green River Lake in 2012.

	Inch class																			Std.
Age	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Total	Percent	CPUE	error
0	2	4	2														8	10	0.40	0.13
1					1	5	7	11	3								27	38	1.32	0.31
2								3	5	5	2						15	22	0.74	0.20
3									3	1	5	4	2				15	22	0.74	0.19
4												1					1	2	0.07	0.03
5												1		1			2	4	0.12	0.07
8																1	1	1	0.05	0.05
Total	2	4	2		1	5	7	14	10	6	7	7	2	1		1	69	100.0		
%	3	6	3		1	7	10	20	15	9	10	10	3	1		1	100			

sw dgrlgn.D12, sw dgrlag.D12

Table 65. Age frequency and CPUE (fish/nn) of white bass collected from experimental gillnets during mid-December at Green River Lake in 2012.

	Inch class										Std.
Age	9	10	11	12	13	14	15	Total	Percent	CPUE	error
0	2	4	2					8	17	0.40	0.14
1		1		5	5		1	12	26	0.61	0.16
2					1	11	15	27	57	1.34	0.27
Total	2	5	2	5	6	11	16	47	100		
%	4	11	4	11	13	23	34	100			

swdgrlgn.D12, swdgrlag.D12

Table 66. Relative weight (Wr) for each length group of walleye collected by gill nets (20 net-nights) at Green River Lake from December 12-14, 2012. Standard errors are in parentheses.

	Length group		
	10.0-14.9 in	15.0-19.9 in	≥20.0 in
Wr	98	97.3	98.2
N	8	41	18

swdgrlgn.D12

Table 67. Walleye population assessment from experimental gillnetting at Green River Lake 1996-2011 (scoring based on statewide assessment).

	CPUE*		Mean length age-2+ at capture		CPUE ≥20.0 in		CPUE age 1		Mortality			
Year	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Instantaneous mortality (z)	Annual mortality (A)	Assessment	Rating
1996	1.81	1	18.5	4	0.12	1	1.44	2	NA		8	F
1997	0.75	1	17.3	3	0.19	1	0.44	1	NA		6	F
1998	0.50	1	17.6	3	0.06	1	0.29	1	NA		6	F
1999	3.20	2	17.3	3	0.13	1	1.67	2	NA		8	F
2000	5.04	3	18.1	4	0.17	1	4.07	4	-0.684	49.6	12	G
2001	5.75	3	17.8	3	0.00	1	5.03	4	NA		11	G
2002	2.57	2	17.8	3	0.39	1	0.74	1	-0.778	54.1	7	F
2003	2.12	2	18.3	4	0.50	2	1.62	2	NA		10	G
2004	1.13	1	16.4	2	0.00	1	0.75	1	NA		5	P
2005	0.63	1	17.8	3	0.13	1	0.50	1	NA		6	F
2006	2.29	2	17.9	3	0.14	1	1.64	2	-0.489	38.7	8	F
2007	6.75	4	18.6	4	0.75	2	3.88	4	-0.689	49.8	14	E
2008	3.67	2	19.6	4	0.93	2	1.07	2	-0.357	30.0	10	G
2009	4.06	3	19.6	4	1.13	3	2.31	3	-0.657	48.2	13	G
2010	3.56	2	18.8	4	1.00	3	1.69	3	-0.566	43.2	12	G
2011	1.79	1	19.3	4	0.79	2	0.42	1	-0.409	33.5	8	F
2012	3.10	2	19.2	4	0.90	2	1.32	2	-0.479	38.1	10	G

* minus age-0 fish

NA - catch data not amenable to mortality estimates

sw dgrlgn.d96-12

sw dgrlag.d96-12

Table 68. Relative weight (Wr) for each length group of white bass collected by gill nets (20 net-nights) at Green River Lake from December 12-14, 2012. Standard errors are in parentheses.

	Length group		
	6.0-8.9 in	9.0-11.9 in	≥12.0 in
Wr		91.3	96.5
N	0	10	38

swdgrlgn.D12

Table 69. Largemouth bass relative abundance and CPUE (fish/hr) collected during 0.5 hours (4- 0.50-hour runs) of diurnal electrofishing at West Fork Drakes Reservoir May 25, 2012.

	Inch class																				
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	Std err
Largemouth bass	2	10	9	2	22	40	26	14	24	20	6	5	1	1	2		3	2	3	192	192.00	25.77

sw dw fdbb.d12

Table 70. Spring diurnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at West Fork Drakes Reservoir during mid-April 2007, mid-May 2009 and late-May 2012.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2007	26.95	15.29	31.94	5.72	29.94	5.78	5.99	2.68	2.00	1.26	95.00	23.72
2009	42.00	11.02	47.00	5.74	16.00	2.31	9.00	2.52	1.00	1.00	114.00	11.49
2012	45.00	8.39	104.00	16.25	31.00	3.00	12.00	1.63	5.00	1.00	192.00	25.77

swdwfdbb.D07, 09, 12

Table 71. PSD and RSD_{15} values for largemouth bass collected during 0.5 hour (4-0.125-hour runs) of spring diurnal electrofishing at West Fork Drakes Reservoir on 25 April 2012. 95% confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD_{15}
Largemouth bass	147	29(7)	8(4)

swdwfdbb.D12

Table 72. Age frequency and CPUE (fish/hr) of largemouth bass collected during diurnal electrofishing at West Fork Drakes Reservoir on 25 April 2012.

	Inch class																					
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	Percent	CPUE	Std. error
1	2	10	9																	21	11	21.00	5.97
2				2	22	40	21	3												88	46	87.60	10.37
3							3	7	7	2	1									17	9	17.40	4.52
4							3	4	14	10	1									32	17	32.40	5.56
5										8	2	5								15	8	15.40	3.26
6							3		2		1		1		2		2			11	6	10.70	2.11
7														1						1	1	1.00	1.00
8																	2	2	3	7	3	6.50	1.26
Total	2	10	9	2	22	40	26	14	24	20	6	5	1	1	2	0	3	2	3	192	100		
%	1	5	5	1	11	21	14	7	13	10	3	3	1	1	1	0	2	1	2	100			

swdwfdbb.d12; swdwfdag.d12

Table 73. Population assessment of largemouth bass based on diurnal spring sampling at West Fork Drakes Reservoir from 2007-2012 (scoring based on statewide criteria).

	2007		2009		2012	
Parameter	Value	Score	Value	Score	Value	Score
Mean length age-3 at capture	11.3	3	11.3	3	11.3	3
Spring CPUE age-1	19.00	2	34.00	2	21.00	2
Spring CPUE 12.0-14.9 in	29.94	2	16.00	1	31.00	2
Spring CPUE ≥15.0 in	5.99	2	9.00	2	12.00	2
Spring CPUE ≥20.0 in	2.00	3	1.00	2	5.00	4
Instantaneous Mortality (z)	ND		ND		-0.4512	
Annual Mortality (A)%					36.3	
Total Score		12		10		13
Assessment Rating	GOOD		FAIR		GOOD	

*No age data collected, value carried over from years with age data

ND = no age data collected

sw dw fdag.d12

sw dw fdbb.D07, 09, 12

Table 74. Length frequency and CPUE (fish/hr) of each inch class of bluegill and redear sunfish collected by diurnal electrofishing (4- 0.125-hour runs) at West Fork Drakes Reservoir on 25 May 2012 .

	Inch class									Std.
Species	2	3	4	5	6	7	8	Total	CPUE	error
Bluegill	4	29	49	54	38	7		181	362.00	72.98
Redear sunfish		4	10	32	25	27		98	196.00	59.01

swdwfdbg.D12

Table 75. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at West Fork Drakes Reservoir in mid-April 2007, mid-May 2009 and late-May 2012. Standard errors are in parentheses.

	Length group				
Year	<3.0 in	3.0-5.9 in	6.0-7.9 in	>8.0 in	Total
2007	10.00	392.00	156.00	0.00	558.00
	(7.57)	(68.35)	(24.98)		(88.29)
2009	38.00	390.00	180.00	0.00	608.00
	(13.61)	(68.69)	(51.69)		(115.47)
2012	8.00	264.00	90.00	0.00	362.00
	(4.62)	(72.30)	(29.10)		(72.98)

swdwfdbg.D07, D09 & D

Table 76. Spring electrofishing CPUE (fish/hr) for each length group of redear sunfish collected at West Fork Drakes Reservoir in mid-April 2007, mid-May 2009 and late-May 2012. Standard errors are in parentheses.

	Length group					
Year	<3.0 in	3.0-5.9 in	6.0-7.9 in	>8.0 in	>10.0 in	Total
2007	0.00	38.00	32.00	18.00	0.00	88.00
		(22.24)	(12.65)	(8.25)		(36.51)
2009	2.00	112.00	198.00	8.00	0.00	320.00
	(2.00)	(50.28)	(32.88)	(4.62)		(80.47)
2012	0.00	92.00	104.00	0.00	0.00	196.00
		(29.30)	(37.24)	(0.00)		(59.01)

swdwfdbg.D07, D09 & D

Table 77. Proportional stock density (PSD) and relative stock density (RSD) of bluegill and redear sunfish collected by diurnal electrofishing at West Fork Drakes Reservoir on 25 May 2012. Numbers in parentheses represent 95% confidence intervals.

Species	N	PSD	RSD[A]
Bluegill	177	25(5)	0
Redear sunfish	94	29(9)	0

[A] Bluegill=RSD_8; redear sunfish=RSD_9

swdwfdbg.D12

Table 78. Bluegill population assessments from 2007, 2009 and 2012 at West Fork Drakes Reservoir (scoring based on statewide assessment).

	Year					
	2007		2009		2012	
Parameter	Value	Score	Value	Score	Value	Score
Mean length age-2 at capture	4.2	2	4.2	2	4.2	2
Years to 6.0 in	3.4	3	3.4	3	3.4	3
CPUE ≥6.0 in	156.00	4	180.00	4	88.00	4
CPUE ≥8.0 in	0.00	0	0.00	0	0.00	0
Instantaneous mortality (z)	ND		-1.03168		ND	
Annual mortality (A)			64.4			
Total score:		9		9		9
Assessment rating	Fair		Fair		Fair	

ND - no age data collected
swdwfdag.d09
swdwfdbg.D07, D09 & D12

Table 79. Redear population assessments from 2007, 2009 and 2012 at West Fork Drakes Reservoir (scoring based on statewide assessment).

	Year					
	2007		2009		2012	
Parameter	Value	Score	Value	Score	Value	Score
Mean length age-3 at capture	6.6	4	6.6	4	6.6	4
Years to 8.0 in	5.0	2	5.0	2	5.0	2
CPUE ≥8.0 in	18.00	4	8.00	2	0.00	0
CPUE ≥10.0 in	0.00	0	0.00	0	0.00	0
Instantaneous mortality (z)	ND		-0.642			ND
Annual mortality (A)	ND		47.4			
Total Score:		10		8		6
Assessment rating	Fair		Fair		Poor	

ND - no age data collected or data not applicable.
swdwfdag.d09
swdwfdbg.D07, D09, D12

CENTRAL FISHERIES DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Lake sampling conditions for 2012 are summarized in Table 1.

Taylorsville Lake (3,050 acres)

Spring diurnal electrofishing was completed in March 2012 to assess the black bass population. Three sections (Big Beech Creek, Ashes/Jacks Creek, and Van Buren) of Taylorsville Lake were sampled for 7.5 hours (2.5 hours per section – 30 minute runs). Length distribution and CPUE for largemouth bass are presented in Tables 2 and 3. Numbers of bass collected in 2012 (138.40 fish/hr) were higher than the lakes historic average of 110.40 fish/hr. Catch rate for keeper bass (≥15.0 in) was 14.53 fish/hr, lower than the lake average (16.24 fish/hr) for these harvestable-size fish. Ashes and Jack's Creek were the areas with the highest catch rate for largemouth bass. Stocked fish (marked by fin-clips) made up 3% of the largemouth bass collected at Taylorsville Lake. The PSD for largemouth bass was 47 which was lower than the lake's average of 55 (Table 4). Additionally, the RSD_{15} value was 13 which was also lower than the lake average of 22. The largemouth bass population assessment score, based on spring electrofishing data, was 16 ("Good"), which is consistent with the average rating of "Good" at Taylorsville Lake (Table 5).

Length frequency, relative weight (W_r), and age 0 and age 1 year class strength of largemouth bass based on September electrofishing are presented in Tables 6–8. Average body weights for largemouth bass in 2012 (W_r =88) were lower than past years and much lower than lake's historical average (W_r =97) (Table 7). Catch rate of age 0 largemouth bass in 2012 (54.44 fish/hr) was higher than the lake historic average of 44.60 fish/hr. No largemouth bass were stocked into Taylorsville Lake in 2012 due to the above average numbers of young-of-the-year largemouth bass sampled during the fall. Largemouth bass fingerlings have been stocked almost annually since 2000 at rates ranging from 5 fish/acre to 10 fish/acre and from 1985 to 1992 at various rates. The need for stocking and the numbers stocked in reservoirs are based (since 2004) on results of the age 0 year class strength sampled in early September and the predicted age 1 year class strength the following spring.

Trap netting efforts for crappie (Table 9) resulted in the collection of 82 white crappie and 476 black crappie. Crappie were sampled with trap nets during 48 net-nights. PSD and RSD_{10} values are shown in Tables 10 and 11. Age and growth determinations for black and white crappie were completed using otoliths (Tables 12-13 and 15-16). Age studies indicated that the majority of white reached 9.0 in by age 2 and black crappie reached 9.0 in between age 2 and 3. The crappie population assessment scores (Tables 14 and 17) rated "Fair" for both white and black crappie. The crappie population is very cyclic at Taylorsville Lake with peaks occurring every 7 to 9 years. In an effort to help recruitment on the lake, 30,710 (10.1 fish/acre) white crappie (2.7 in) were stocked in 2009, 35,985 (11.7 fish/acre) white crappie (2.5-4.7 in) were stocking in 2010, 20,892 (6.8 fish/acre) white crappie (3.0 in) were stocked in 2011, and 70,473 (23.1 fish/acre) white crappie were stocked in 2012 into Taylorsville Lake. Additionally, 1,677 crappie (0.6 fish/acre; 4.3-9.2 in) were stocked into Taylorsville Lake, which were removed from Boltz Lake in an effort to reduce the crowded crappie population. These stocked crappie made up 8% of the age 1 and older white crappie sampled in the fall of 2012, a drop from 58% in the fall of 2011. Average weights of white and black crappie in the fall of 2011 were acceptable at Taylorsville Lake (Table 18). See the Black Bass Investigation (F-40) Annual Performance Report for further information concerning the crappie stockings at Taylorsville Lake. Additionally, spring and fall electrofishing surveys were conducted on white and black crappie populations at Taylorsville Lake in March and October (Tables 19 and 20) to supplement the data collected during fall trap netting. Black crappie catch rates during spring and fall electrofishing surveys were very consistent between samples, as well as, consistent with the numbers collected during fall trap netting. On the other hand, white crappie catch rates during spring and fall electrofishing surveys were not as consistent between spring and fall, and significantly higher numbers of white crappie were sampled during both electrofishing surveys compared to fall trap netting.

Fall gill netting for hybrid striped bass and white bass was conducted in October 2012 (Tables 21–29). A total of 47 hybrid striped bass were collected in 2012 compared to 94 in 2011 and 51in 2010. Hybrid striped bass were captured in 12 net-nights (4 nets for 3 nights) for a CPUE of 3.92 (± 1.36) fish/nn. The hybrid striped bass population has exhibited notable fluctuations since 1990. The density of hybrid striped bass in Taylorsville Lake appeared to be negatively related to the amount of tailwater discharge (due to rainfall) and fishing pressure. It is theorized that above-normal discharge leads to escapement of hybrid striped bass but has little effect on the white bass density in the lake. Annual stocking rates for hybrid striped bass have been 20 fish/acre (1.4 to 2.0 in) for the last 14 years. Age and growth studies were completed for hybrid striped bass using otoliths (Tables 22 and 23). Additionally, hybrid striped bass were differentiated from white bass due to being marked with oxytetracycline (OTC) at the fish hatchery. Studies indicate hybrid striped bass continue to reach harvestable size (15.0 in) between age 1 and 2, typical growth at Taylorsville Lake. The relative weight (W_r) index for hybrid striped bass (84) shows below average body weight for hybrid striped bass; however it is almost equal to the lake average of 86. The population assessment for hybrid striped bass was rated at "Fair". Taylorsville Lake was stocked with 63,419 (20.8 fish/acre; 1.6-2.8 in) hybrid striped bass in June 2012. The hybrid striped bass stocking was divided into 31,928 original cross (no mark) and 31,491 reciprocal cross hybrids (OTC marked). This is the initial stocking of a project that will look at the performance of original vs. reciprocal crosses of hybrid striped bass in Taylorsville Lake.

Data for white bass collected during fall 2012 gillnetting studies are presented in Tables 21 and 26-29. White bass comprised about 59% of the *Morones* sampled, compared to 72% in 2011, 80% in 2010, 34% in 2009 and 69% in 2008. Age and growth studies indicated white bass reach 12.0 in between age 3 and 4, a reduction of growth compared to previous years. Relative weight values revealed acceptable body weights, with good weights for smaller fish and decreasing body condition for larger, older fish (Table 28). The white bass population assessment rated "Poor", a reduction in rating from previous years (Table 29).

See the Black Bass Investigation (F-40) Annual Performance Report for channel catfish and blue catfish sampling data. A total of 23,500 (7.7 fish/acre) blue catfish (8.0-15.0 in) were stocked in Taylorsville Lake in 2012.

Herrington Lake (2,410 acres)

Diurnal electrofishing studies were completed in March 2012 to monitor the black bass population. Upper, middle, and lower sections were sampled for a total of 7.5 hours (2.5 hours per section). Species composition, relative abundance, and CPUE of black bass collected in the spring are presented in Table 30. Largemouth bass dominated the black bass fishery, with spotted bass comprising 5.2% of the bass sampled. No smallmouth bass were collected in 2012. Length distribution and CPUE for largemouth bass are presented in Tables 30 and 31. Numbers of bass collected in 2012 (196.00 fish/hr) were higher than the lakes historic average of 118.40 fish/hr, as well as, the highest catch rate in the last 17 years. Catch rate for keeper bass (≥12.0 in) was 55.73 fish/hr, higher than the lake average (47.21 fish/hr) for these harvestable-size fish. Gwynn Island (mid-lake) area had the highest catch rate for largemouth bass. Stock fish (marked by fin-clips) made up 2% of the largemouth bass collected at Herrington Lake. The PSD for largemouth bass was 44 which was lower than the lake's average of 56 (Table 32). Additionally, the RSD_{15} value was 12 which was lower than the lake average of 23. The largemouth bass population assessment score, based on spring electrofishing data, was 17 ("Excellent"), higher than the average rating of "Good" at Herrington Lake (Table 33). Fall electrofishing evaluated largemouth bass relative weight index and index of year class strength (Tables 34-36). Body weights for largemouth bass in 2012 (W_r =92) were similar to the lake's historical average (W_r =93) (Table 35). The year class strength model for Herrington Lake indicated an average recruitment for young-of-year largemouth bass in 2012. Age-0 CPUE (33.56 fish/hr) was almost equal to the lake average (34.46 fish/hr); however, largemouth bass were stocked into Herrington Lake in 2012 (Table 36). Fingerling (3.8 - 4.9 in) largemouth bass were stocked in October at a rate of 9.2 fish/acre, totaling 22,256 fish (no clip).

Diurnal electrofishing studies were completed in March 2012 to monitor the crappie population. Upper, middle, and lower lake sections were sampled for a total of 4.5 hours (1.5 hours per section). This year, a total of 380 crappie were collected, compared to 409 in 2011, 225 in 2010, 99 in 2009, 108 in 2008, 81 in 2007, and 84 in 2006 (Table 37). Catch was dominated by black crappie in the lower section of the lake, while white crappie dominated the mid and upper sections of the lake. However, the overall catch was dominated by white crappie, which made up 85% of the crappie sampled at Herrington Lake in 2012. PSD and RSD_{10} values are shown in Table 38.

Age and growth studies of white crappie indicated they reach 9.0 in between age 2 and age 3, and 11.0 in between age 3 and age 4 (Table 39). Age frequency of white crappie showed that their population is dominated by age-3 fish, the 2009 year class (Table 40). A population assessment was developed for spring electrofishing of white and black crappie at Herrington Lake. The population assessment for white crappie indicated a "Good" population for 2012, an improvement compared to past years (Table 41). Age and growth studies also showed that black crappie reached 9.0 in. between age 1 and age 2 (Table 42). Age-3 fish dominated the black crappie sample (Table 43) indicating a good spawn in 2009. The population assessment for black crappie indicated a "Fair" population for 2012 (Table 44), similar to past years.

Gill netting for hybrid striped bass and white bass was completed in October 2012. During the 17 net-night sampling period, 30 hybrid striped bass and 207 white bass were collected (Table 45). Otoliths were taken from both species for age and growth determinations. Results of these studies indicated excellent growth rates both hybrids (Tables 46-47) and white bass (Tables 50-51). Hybrid striped bass continue to reach 15.0 in between age 1 and 2 (Table 46), as they have historically. Of the hybrid striped bass sampled, 83% were age 1+ or younger (Table 47). The population assessment for hybrid striped bass indicated a "Fair" population, similar to the average rating of "Fair" (Table 49). White bass age and growth determinations showed they reach 9.0 in before age 1 and 12.0 in between age 1 and age 2 (Table 50). Of the white bass sampled, 78% were age 2+ or younger (Table 51). Strong year-classes over the past couple of years are providing an excellent opportunity for some quality white bass fishing at Herrington Lake. The white bass population assessment indicated a "Good" population, similar to the past couple of years (Table 53). Herrington Lake was stocked with 50,579 (21.0 fish/acre; 1.6-2.8 in) hybrid striped bass in June 2012. The hybrid striped bass stocking were divided into 25,131 original cross (no mark) and 25,266 reciprocal cross hybrids (OTC marked). This is the initial stocking of a project that will look at the performance of original vs. reciprocal cross hybrid striped bass in Herrington Lake.

Guist Creek Lake (317 acres)

Spring diurnal electrofishing studies were completed for largemouth bass in April 2012 (Table 54). Total largemouth bass catch rate (168.00 fish/hr) was slightly higher than the lake's average of 160.49 fish/hr (Table 55). The PSD for largemouth bass was 45 compared to the lake average of 67 (Table 56). The RSD_{15} was 25 compared to the lake's average 41. The population assessment gave a rating of "Good", the same as the last six years (Table 57). Fall sampling was conducted for relative weight and index for year class strength at age 0 and age 1 (Tables 58–60). Relative weights indicated good body condition for bass, especially for bass over 15.0 in. Mean length of age-0 largemouth bass (4.1 in) decreased from last year (4.4 in); however, their catch rate increased from 2011 (34.67 fish/hr to 46.00 fish/hr). The year class strength model indicated average recruitment (avg. = 46.47 fish/hr) for young-of-year largemouth bass in 2012. However, fingerling (5.0 in) largemouth bass were stocked in October at a rate of 10.0 fish/acre, totaling 3,174 fish (no fin clip).

Hybrid striped bass were not sampled in 2012. Guist Creek Lake was stocked with 9,531 (30.0 fish/acre; 1.6 in) hybrid striped bass in June 2012.

Results of the sixth year of channel catfish sampling at Guist Creek Lake with baited tandem hoop nets by the Black Bass Research Section are presented in their Annual Performance Report. Guist Creek Lake was stocked with 3,167 (10.0 fish/acre; 7.0-12.0 in) channel catfish in July 2012.

Beaver Lake (158 acres)

Spring diurnal electrofishing was completed in April 2012 to assess the black bass population. The CPUE for all sizes was 266.50 fish/hr; higher than the current lake average of 240.01 fish/hr (Tables 61 and 62). The largemouth bass removal conducted in the spring of 2011 appeared to be beneficial for increasing the catch rates for ≥ 15.0 in bass. The catch rate of ≥ 15.0 in bass was the highest since 2005. Additionally, numbers of bass in other length groups (< 8.0 in, 8.0 – 11.9 in., and 12.0-14.9 in) also increased from last year. The PSD and RSD_{15} for largemouth bass respectively, were 52 and 8, compared to the current lake average of 29 and 3 (Table 63). The population assessment score indicated a "Good" bass population (Table 64), which is the most common assessment rating for Beaver Lake largemouth bass. Fall diurnal electrofishing was conducted for relative weights and the index of age 0 year class strength of largemouth bass at Beaver Lake (Tables 65- 67).

The relative weight index continues to reflected below-average weights for all three length groups in 2012 (W_r = 85), however, it is equal to the lakes average of 85. Mean length of age 0-bass increased slightly and catch rates of age-0 decreased slightly in 2012 compared to 2011 (Table 67). However, the catch rate of age- 0 bass was well above the lake's average (107.4 fish/hr). Therefore, largemouth bass were not stocked in 2012. Finally, no shad were observed at Beaver Lake in 2012.

Spring diurnal electrofishing was completed in May 2012 to assess the panfish populations (Tables 68-77). Length frequency results showed the majority of bluegill were in the 4.0-5.0 in range, with most redear sunfish around 8.0 in size (Table 68). The PSD for bluegill was 31 compared to the lake's average of 23. The RSD_8 was 0 compared to the lake's average of 1. Redear sunfish PSD and RSD_9, respectively, were 90 and 30 (Table 69). CPUE values for all size groups of bluegill were lower than last year, except for bluegill in the 6.0-7.9 in group (Table 70). The total CPUE of bluegill in 2012 was slightly lower than the lake's average of 214.55 fish/hr. Age and growth studies indicated bluegill reached 6.0 in between age 2 and 3 (Table 71). The population assessment for bluegill indicated a "Fair" population rating, which is a similar rating to previous years at Beaver Lake (Table 73). The catch rate of redear sunfish ≥8.0 in was 68.00 fish/hr compared to 23.20 fish/hr in 2011 (Table 74). Overall, catch rates for all length groups were higher than last several years, except for redear sunfish less than 6.0 in. Age and growth studies continued to show redear sunfish reaching 6.0 in between age 2 and 3, and 8.0 between age 3 and 4 (Table 75). Twelve redear sunfish ≥10.0 in (9.60 fish/hr) were collected in 2012, the highest recorded catch rate for Beaver Lake. Age frequency (Table 76) indicated good numbers of redear sunfish through age 4 in the fishery. Redear sunfish numbers have increased since the gizzard shad and grass carp removal, which resulted in an increase in aquatic vegetation. The population assessment indicated a "Excellent" redear sunfish fishery (Table 77). Relative weight data for redear sunfish were very good for all length groups. Additionally, body condition of bluegill at Beaver Lake improved in 2012 compared previous years (Table 78).

No applications of aquatic herbicides were completed at Beaver Lake in 2012. No liquid fertilizer applications have been made since 2001.

Boltz Lake (92 acres)

Three efforts were made to reduce the crowded crappie population at Boltz Lake in March, April, and May of 2012. Sixteen hundred seventy-seven (1,677) crappie (19.5 fish/acre) were removed from Boltz Lake and transported to Taylorsville Lake. The average size of the crappie removed from Boltz Lake was 7.6 in, with crappie ranging in size from 4.3 to 9.2 in.

Spring nocturnal electrofishing was completed in April 2012 to assess the black bass population. Results indicated extremely low bass numbers (66.00 fish/hr) compared to the lake's historical average (193.93 fish/hr) (Tables 79 and 80). This sample may have been influence by weather patterns prior to the sampling. The population assessment indicated a "Fair" bass population, the same as six out of the past eight years (Table 82). Fall diurnal electrofishing for largemouth bass relative weight and YOY data was conducted in September (Tables 83-85). Relative weights indicated acceptable body condition (W_r = 87), slightly lower than the lake average relative weight of 90 (Table 84). Fall sampling indicated above average numbers of age 0 bass, (84.67 fish/hr; average= 52.04 fish/hr); however, the average size decreased from 2011 (Table 85). Due to the above average catch rate of age 0 largemouth bass, they were not stocked into Boltz Lake in 2012. Currently, Boltz Lake does not have a population of gizzard shad.

Spring diurnal electrofishing for bluegill was conducted in May 2012 (Tables 86). The overall bluegill catch rates were slightly higher in 2012 (584.00 fish/hr) than the lake average (516.15 fish/hr) (Table 88). Age and growth data indicated bluegill reached 6.0 in by age 3, similar to past growth rates (Table 89). The majority (84%) of bluegill collected were age 1 through age 3 (Table 90), similar to past years. The population assessment for bluegill indicated a "Good" population, the same as the previous 2 years' ratings (Table 91).

Channel catfish were sampled in October using tandem hoop nets at Boltz Lake in 2012. Length frequency results for channel catfish showed a size distribution between 10.1 – 21.8 in (Table 93). The PSD and RSD_{24} for channel catfish were 33 and 0, respectively (Table 94). Relative weights indicated average condition for channel catfish (Table 95). Boltz Lake was stocked with 1,726 (18.7 fish/acre; 7.0-12.0 in) channel catfish in July 2012. Boltz Lake has been a blue catfish study lake (Black Bass Research Project) since 1998.

Results of the blue catfish sampling at Boltz Lake by the Black Bass Research Project are presented in their Annual Performance Report. Boltz Lake was stocked with 424 (4.6 fish/acre; 7.0-15.0 in) blue catfish in August 2012.

Bullock Pen Lake (134 acres)

Spring nocturnal electrofishing was completed in April 2012 to assess the black bass population. The total catch rate of largemouth bass (212.50 fish/hr) was the highest recorded at Bullock Pen Lake. (Tables 97 and 98). The PSD for largemouth bass was 57 and RSD_{15} was 34 in 2012, which are both below that lake average of 70 and 40 respectively (Table 99). The 2011 population assessment for largemouth bass indicated a "Good" population, an increase from the last 2 years' "Fair" assessments (Table 100). Electrofishing was conducted diurnally in September to determine the relative weights and YOY year class strength for largemouth bass (Tables 101-103). Relative weights indicated acceptable body condition for bass ($W_r = 93$), which was almost average for the lake ($W_r = 94$). Larger fish exhibited better condition compared to smaller length groups, which is a function of the shad forage base (Table 102). CPUE for both age-0 and age-0 ≥5.0 in decreased from last year (Table 103). Age-0 CPUE (22.67 fish/hr) was almost equal to the lake average (21.06 fish/hr); however, largemouth bass were stocked into Bullock Pen Lake in 2012. Fingerling (4.7 in) largemouth bass were stocked in October at a rate of 10.0 fish/acre, totaling 1,340 fish (no clip).

Channel catfish were sampled in October using tandem hoop nets at Bullock Pen Lake in 2012. Length frequency results for channel catfish showed a fair size distribution between 8.2-17.3 in (Table 104). The PSD and RSD_{24} for channel catfish were 9 and 0, respectively (Table 105). Relative weights indicated average condition for channel catfish (Table 106). Bullock Pen Lake has been a blue catfish study lake (Black Bass Research Project, F-40) since 1998. Bullock Pen Lake was stocked with 732 (5.4 fish/acre; 7.0-15.0 in) blue catfish in July and 2,928 (21.9 fish/acre; 7.0-12.0 in) channel catfish in July 2012.

Corinth Lake (96 acres)

Spring nocturnal electrofishing was completed in April 2012 to assess the black bass population (Table 108). The catch rate for largemouth bass decreased or remained the same compared to last year for the different length groups of largemouth bass (Table 109). The total catch rate of largemouth bass in 2012 (268.00 fish/hr) was higher than the lake's average catch rate of 235.07 fish/hr. The PSD for largemouth bass was 26, the same as last year's value (Table 110), but higher than the lake's average of 21. The RSD_{15} decreased from 23 in 2010 and 13 in 2011 to 10 in 2012, but was higher than the lake's average of 7. The population assessment for largemouth bass was rated "Good"; a decrease from last year's rating of "Excellent" (Table 111), but the same as the average assessment rating of "Good". Fall diurnal electrofishing for largemouth bass was conducted to determine year class strength and relative weight (Table 112). Relative weights of largemouth bass continue to be below average, except for largemouth bass ≥ 15.0 in (Table 113). The overall relative weight in 2012 ($W_r = 83$) was almost equal to the average relative weight observed at Corinth Lake ($W_r = 84$). Largemouth bass mean length at age 0 increased and the catch rates of all age 0 sizes declined from last year (Table 114). Age-0 CPUE (52.89 fish/hr) was significantly lower than the lake average (95.93 fish/hr); however, largemouth bass were not stocked into Corinth Lake in 2012.

Spring diurnal electrofishing for bluegill and redear sunfish was completed in May 2012 to obtain length frequency, CPUE, age and growth, age frequency and population assessment data (Table 115). The bluegill PSD (19) was lower than the lake's average of 23 (Table 116). Age and growth studies showed that bluegill reach 6.0 in by age 3 (Table 118). The population assessment indicated a "Fair" population, identical to the last eight years (Table 120). Redear sunfish numbers (67.20 fish/hr) decreased slightly in 2012; however, it was very close to the 15 year average (73.50 fish/hr). Redear sunfish PSD was 69, much higher than the lake's average of 49. Catch rate for ≥8.0 in redear sunfish increased from 20.00 fish/hr in 2011 to 24.00 fish/hr in 2012 (Table 121). No ≥10.0 in redear sunfish were collected in 2012, therefore, it has been since 2004 since significant numbers of ≥10.0 in redear sunfish have been observed at Corinth Lake. Age and growth studies show redear sunfish reaching 8.0 in between age 3 and 4 (Table 122). The population assessment for redear sunfish continued to be rated "Good" (Table 124). Relative weights for bluegill and redear sunfish were collected with fall diurnal electrofishing. Relative weights indicated good body condition for bluegill and redear sunfish (Table 125).

Channel catfish were sampled in October using tandem hoop nets at Corinth Lake in 2012. Length frequency results for channel catfish showed a good size distribution between 9.2-20.0 in (Table 126). The PSD and RSD_{24} for channel catfish were 13 and 0, respectively (Table 127). Relative weights indicated slightly below average condition for channel catfish (Table 128). Corinth Lake was stocked with 1,945 (20.3 fish/acre; 6.0-9.0 in) channel catfish in July 2012.

Elmer Davis Lake (149 acres)

Elmer Davis Lake was sampled diurnally for largemouth bass in April 2012. Length frequency, CPUE, PSD, age and growth, age frequency and population assessment data were collected (Table 130). Total catch rates of largemouth bass in 2012 (394.00 fish/h) were higher than the lake's average of 313.15 fish/h (Table 131). Numbers of bass in the protected slot (12.0-15.0 in) and bass ≥15.0 in increased from last year and were higher than the lake's averages. The PSD for largemouth bass was 36 compared to the lake's average of 24 (Table 132). The RSD_{15} was 9 compared to the lake's average of 7. Growth rates indicated most bass are reaching harvestable size (12.0 in) between age 3 and 4 (Table 133). Most bass (66%) were age 3 or younger (≤12.0 in, Table 134). Population assessment data indicated an "Excellent" population, the first time Elmer Davis Lake has received this rating in recent years (Table 135). Fall diurnal electrofishing for relative weights and year class strength of largemouth bass was completed in September 2012 (Table 136). Relative weights indicated a decrease in body condition of largemouth bass at Elmer Davis Lake in 2012 ($W_r = 84$) compared to the lakes average relative weight of 87 (Table 137). Samples indicated that the number of age 0 bass in the fall of 2012 (56.00 fish/hr) was significantly less than the lake's average (138.15 fish/hr); however, largemouth bass were not stocked into Elmer Davis Lake (Table 138).

Diurnal electrofishing for length frequency, CPUE, age and growth, age frequency and population assessment was conducted for bluegill and redear sunfish in May 2012 (Table 139). The total bluegill catch rate in 2012 (366.40 fish/hr) was higher than the lake's average 307.16 fish/hr (Table 141). The PSD value for bluegill was 21 and continues to be lower than the lake's average of 35 (Table 140). Likewise, the RSD_8 (0.2) remains lower than the lake's average of 3. Age and growth studies showed bluegill reached 6.0 in between age 2 and 3 (Table 142). Most bluegill (69%) were age 2 and less (Table 143). The population assessment for bluegill was found to be "Fair", a decrease from the lake's average rating of "Good" (Table 144). The total catch rate of redear sunfish in 2012 (112.00 fish/hr) was twice the lake's average of 52.36 fish/hr (Table 145). The PSD for redear sunfish was 36 compared to the lake's average of 56. The RSD_9 was 17 compared to the lakes average of 21 (Table 140). Age and growth studies indicated good growth rates with redear sunfish reaching 6.0 in by age 2 and 8.0 in between age 3 and 4 (Table 146). The redear sunfish population assessment indicated an "Excellent" population, the same as last year's rating, but above the lake's average rating of "Good" (Table 148). Relative weight results for bluegill and redear sunfish indicated excellent body condition for both species (Table 149). Gizzard shad removal efforts were conducted in 1994 and 1997 with success. However, a source for gizzard shad invasions can be attributed to the city of Owenton's water supply reservoir, Lower Thomas Lake, located in the drainage of Elmer Davis Lake. Gizzard shad have again become established due to overflow from Lower Thomas Lake during spring high water events. This gizzard shad reestablishment has had a negative influence on the panfish populations at Elmer Davis Lake.

Results of the channel catfish sampling at Elmer Davis Lake by the Black Bass Research Section are presented in their Annual Performance Report. Elmer Davis Lake was stocked with 3,290 (22.1 fish/acre; 7.0-12.0 in) channel catfish in July 2012.

Kincaid Lake (183 acres)

Spring nocturnal electrofishing studies were conducted in April 2012 for PSD, length frequency, and CPUE for largemouth bass (Table 150). Total catch rate in 2012 (168.00 fish/hr) was below the lake average of 213.45 fish/hr (Table 151). The largemouth bass PSD and RSD_{15}, respectively, were 67 (average = 68) and 40 (average = 45) in 2012 (Table 152). The population assessment indicated a "Good" bass population, consistent with the past decade at Kincaid Lake (Table 153). Fall diurnal electrofishing for relative weights and index of year class strength at age 0 was conducted in September (Table 154-156). Relative weights of largemouth bass length groups were about average for Kincaid Lake in 2012 (2012 $W_r = 90$; lake average = 92) (Table 155). Age-0 CPUE (47.33 fish/hr) was greater than the lake average (39.02 fish/hr) (Table 156), therefore, largemouth bass were not stocked into Kincaid Lake in 2012. Kincaid Lake has hosted a population of gizzard shad for decades.

Channel catfish were sampled in October using tandem hoop nets (3 sets of 3 tandem nets) at Kincaid Lake in 2012. Length frequency results for channel catfish showed a good size distribution between 9.1-26.1 in (Table 157). The PSD and RSD_{24} for channel catfish were 25 and 1, compared to 6 and 0 in 2011 (Table 158). Relative weights indicated average condition for channel catfish (Table 159). Kincaid Lake was stocked with 2,205 (12.0 fish/acre; 6.0-9.0 in) channel catfish in March 2012.

McNeely Lake (51 acres)

McNeely Lake was electrofished during the day for largemouth bass population analysis in April 2012. Data for length frequency, CPUE, PSD, age frequency and population assessment were collected (Table 161). The total catch rate of largemouth bass (203.20 fish/hr) in 2012 was slightly lower than the average total catch rate of 214.10 fish/hr (Table 162). Largemouth bass PSD was 33 which was slightly lower than the lake average of 36. However, the RSD_{15} of 13 was slightly higher than the lake average of 11 (Table 163). Growth rates indicate most bass are reaching harvestable size (12.0 in) between age 3 and 4 (Table 164). Most bass (72%) were between age 2 and age 4 (Table 165). The population assessment rating was "Fair" in 2012, a reduction from the average "Good" rating generally observed at McNeely Lake (Table 166). Diurnal electrofishing for largemouth bass in September 2012 was completed to collect relative weight and the index of year class strength at age 0 (Table 167). Relative weights were below desired levels in 2012 ($W_r = 87$) (Table 168). Additionally, relative weights were lower than the average relative weight ($W_r = 89$) observed at McNeely Lake. CPUE for age-0 (242.00 fish/hr) increased from last year (Table 169), and was significantly higher than the lake average (123.77 fish/hr) for the last thirteen years. Therefore, largemouth bass were not stocked into McNeely Lake in 2012. Currently, McNeely Lake does not contain a population of gizzard shad.

Bluegill and redear sunfish were sampled in May 2012 for length frequency, CPUE, age and growth, age frequency and population assessment (Table 170). Catch rates for bluegill (533.00 fish/hr) increased in 2012 above the lake's average catch rate of 341.91 fish/hr (Table 172). The bluegill PSD was 39 compared the lakes average of 36 (Table 171). RSD_8 was 0.2 in 2012, compared to the lakes average of 0.3. Age and growth studies showed that bluegill continue to reach 6.0 in between age 2 and 3 (Table 173). The majority (78%) of bluegill collected were age 2 and age 3 (Table 174). The population assessment for bluegill continues to be "Good" (Table 175). Total catch rates for redear sunfish continued to increase in 2012, where catch rates (117.00 fish/hr) were significantly higher than the lake average (54.49 fish/hr) (Table176). The PSD for redear sunfish was 51 compared to lake's average of 40, and the RSD_9 was 8 compared to the lake's average of 5 (Table 171). Age and growth studies indicated good growth rates with redear sunfish reaching 6.0 in between age 1 and 2, and 8.0 in by age 3 (Table 177). The redear sunfish fishery was rated "Good", which is similar to past years (Table 179). Relative weight data for bluegill and redear sunfish were collected in the fall (Table 180). Good body condition was observed for both redear sunfish and bluegill during the fall of 2012.

Results of the channel catfish sampling at McNeely Lake by the Black Bass Research Section are presented in their Annual Performance Report. McNeely Lake was stocked with 1,275 (25.0 fish/acre; 7.0-12.0 in) channel catfish in July 2012.

One application of an aquatic herbicide (Reward, diquat dibromide) was made to sections of the shoreline of McNeely Lake on May 8th to control curly-leafed pondweed (*Potomogeton crispus*).

Williamstown Lake

Williamstown Lake was diurnally electrofished for largemouth bass population analysis in April 2012. Data for length frequency, CPUE, PSD, age frequency and population assessment were collected (Table 181). The total catch rate for all sizes of largemouth bass was significantly lower than the 6 year average (71.94 fish/hr) (Table 182). Largemouth bass PSD and RSD_{15} was 61 and 33, respectively (Table 183). Growth rates indicate most bass are reaching harvestable size (12.0 in) between age 2 and 3, which is very good growth (Table 184). Most bass (80%) were between age 2 and age 5, that incorporates a wide range of sizes (7.0 to 19.0 in) (Table 185). The population assessment was "Fair" in 2012, the same as the last four years (Table 186).

Lincoln Homestead Lake

Length frequency, relative abundance, and CPUE of fish collected by electrofishing at Lincoln Homestead Lake in March 2012 are shown in Table 187. Studies show largemouth bass from 3.0 to 22.0 inches in fair numbers. Bluegill over 8.0 in were collected, as well as, redear sunfish over 10.0 in.

General Butler State Park Lake

Length frequency and CPUE of largemouth bass collected in March 2012 at General Butler State Park Lake are presented in Table 188. All sizes of largemouth bass were represented; however, numbers of bass are somewhat limited at this lake. Largemouth bass up to 18.0 in were collected

Table 1. Yearly summary of sampling conditions by waterbody, species sampled and date.

Water body	Species	Date	Time (24hr)	Gear	Weather	Water temp. F	Water level	Secchi (in)	Conditions	Pertinent sampling comments
Herrington	Crappie	3/19	1030	shock	partly cloudy	64 L	729.7	60	good	good sample
		3/19	1030	shock	partly cloudy	64 M	729.7	20	good	good sample
		3/20	1000	shock	partly sunny	65 U	729.0	11	fair	fair sample; murky to muddy water conditions
Taylorsville	Crappie	3/20	1000	shock	mostly sunny	67 B	546.2	19	murky	good sample
		3/21	1030	shock	sunny	67 A	545.4	11	murky	fair sample; murky to muddy water conditions
		3/21	1030	shock	sunny	65 V	545.3	10	murky	fair sample; murky to muddy water conditions
Herrington	LMB	3/22	1000	shock	sunny / warm	68 M	728.0	24 M	good	good samples
		3/22	1400	shock	sunny / warm	71 U	728.0	16 U	good	good samples
		3/26	1400	shock	partly sunny	65 L	725.0	42 L	good	good samples
Taylorsville	LMB	3/27	1000	shock	sunny	66 B	546.5	28	good	good sample
		3/27	1030	shock	sunny	64 V	546.5	30	good	good sample
		3/28	1000	shock	sunny	65 A	546.5	24	good	good sample
General Butler	LMB	3/29	1100	shock	sunny/windy	63	below normal	12	low water	good sample; 2-3 foot below normal lake levels
Lincoln Homestead	LMB	3/30	1100	shock	cloudy/cool	65	normal	28	good	good sample
Beaver	LMB	4/2	1000	shock	cloudy / cool	64	normal	60	good	good sample
Guist Creek	LMB	4/2	1000	shock	cloudy	61	normal	28	good	good samples
Elmer Davis	LMB	4/3	1000	shock	sunny / warm	69	normal	34	good	good sample
Kincaid	LMB	4/3	2000	shock	clear / warm	67	normal	36	good	good sample
Bullock Pen	LMB	4/4	2000	shock	mostly cloudy / cold front	64	normal	18	good	good sample
Williamstown	LMB	4/4	1700	shock	cloudy / cold front	66	above normal	12	fair	fair sample, sampled after a significant thunderstorm
Boltz	LMB	4/4	2000	shock	cloudy / cold front	64	normal	36	fair	fair sample, sampled after a significant thunderstorm and cold front
McNeely	LMB	4/5	1200	shock	sunny/windy	63	normal	24	good	good sample
Corinth	LMB	4/17	2000	shock	cloudy	72	normal	54	good	good sample
Beaver	BG/RESF	4/30	1000	shock	cloudy / warm	69	normal	72	good	good sample
McNeely	BG/RESF	5/2	1000	shock	sunny / windy	72	normal	36		good sample
Elmer Davis	BG/RESF	5/3	1000	shock	partly sunny / warm	71	normal	36	good	good sample; vegetation in upper portion of creek
Boltz	BG	5/3	1000	shock	sunny		normal		good	good sample
Corinth	BG/RESF	5/4	1000	shock	sunny	74	normal	48	good	good samples
Elmer Davis	LMB/BG/RESF	9/11	1000	shock	sunny	75	normal	18	good	good sample
Boltz	LMB/BG/RESF	9/11	1000	shock	sunny	75	normal	48	good	good sample
Corinth	LMB/BG/RESF	9/12	1000	shock	sunny	77	normal	36	good	good sample
Kincaid	LMB	9/13	1100	shock	partly sunny	77	normal	30	good	good sample
McNeely	LMB/BG/RESF	9/14	1000	shock	sunny	77	normal	36	good	good sample
Beaver	LMB/BG/RESF	9/18	1000	shock	overcast / drizzle	73	down 2-3 inches	24	good	good sample; post frontal conditions
Bullock Pen	LMB	9/18	1000	shock	cloudy / breezy / cool	71	Normal	26	good	good sample; cold front
Guist Creek	LMB	9/19	1000	shock	sunny	70	below normal	18	good	good sample

Table 1 (cont).

Water body	Species	Date	Time (24hr)	Gear	Weather	Water temp. F	Water level	Secchi (in)	Conditions	Pertinent sampling comments
Taylorsville	LMB	9/20	1000	shock	sunny	74 B	545.8	60 B	good	good sample
		9/20	1000	shock	sunny	72 A	545.8	39 A		V = Van Buren Area; B = Big Beech and A = Ashes Creeks
		9/21	1000	shock	sunny / breezy	75 V	545.8			
Herrington	LMB	9/24	1000	shock	sunny	72	729.1	60	good	good samples
		9/26	1000	shock	sunny	72	729.1			9/24 – lower section; 9/26 – mid section; 9/27 – upper section
		9/27	1300	shock	cloudy	72	729.1	32		
Boltz	Channel catfish	9/27	1100	hoop net	sunny	68	normal		good	good sample
Bullock Pen	Channel catfish	9/27	1100	hoop net	sunny	67	normal		good	good sample
Kincaid	Channel catfish	10/4	1100	hoop net	sunny / breezy	66	normal		good	good sample
Corinth	Channel catfish	10/4	1000	hoop net	sunny	65	normal		good	good sample
Herrington	Morones	10/9	1000	gillnet		65	730.8		good	good sample
		10/10	1000			65	730.6			
		10/11	1000			65	730.6			
Taylorsville	Morones/	10/16	1000	gillnet	nice week	63	546.0		good	good sample
	Crappie	10/17	1000	trapnet	stable weather	63	545.9			
		10/18	1000			62	545.9			
		10/19	1000			61	545.9			
Taylorsville	Crappie	10/23	1000	shock	sunny/breezy	65	545.7		good	good sample
		10/24	1000	shock	sunny/breezy	66	545.7	36	good	good sample

Table 2. Length distribution and CPUE (fish/hr) of largemouth bass collected in 7.5 hours of 30-minute electrofishing runs for black bass in Taylorsville Lake in April 2012; numbers in parentheses are standard errors.

	Inch class																			
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE
Van Buren																				
Largemouth bass	1	15	17	15	11	5	22	43	30	32	26	26	16	12	4	2			277	110.80 (8.16)
Ashes Creek																				
Largemouth bass		9	11	9	12	4	42	78	62	54	32	31	16	10	3	5	4	2	384	153.60 (18.14)
Big Beech Creek																				
Largemouth bass	5	22	23	31	28	8	21	75	53	38	22	16	10	12	8	3	2		377	150.80 (9.39)
Natural	6	42	51	55	50	17	77	180	143	124	80	73	42	34	15	10	6	2	1007	134.27 (8.04)
2011 Stocked		4			1														5	0.67 (0.54)
2010 stocked							8	16	2										26	3.47 (1.00)
Total																				
Largemouth bass	6	46	51	55	51	17	85	196	145	124	80	73	42	34	15	10	6	2	1038	138.40 (8.57)

Dataset = cfdpstvl.d12

Table 3. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Taylorsville Lake from 1984-2012; numbers in parentheses are standard errors.

	Length group					
Year	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	Total
1984	50.40 (1.80)	88.00 (6.00)	6.00 (2.20)	0.00 (0.00)	0.00 (0.00)	144.40 (5.60)
1985	0.80 (0.60)	43.80 (5.40)	74.80 (9.20)	3.40 (1.00)	0.00 (0.00)	122.20 (14.40)
1986	1.80 (0.20)	11.20 (1.40)	21.00 (1.80)	24.40 (3.00)	0.00 (0.00)	59.00 (5.40)
1987	3.60 (0.60)	5.40 (0.60)	9.20 (1.00)	29.20 (2.60)	0.30 (0.10)	48.00 (3.80)
1988	3.20 (0.80)	8.40 (1.20)	6.00 (1.00)	19.60 (3.00)	0.15 (0.11)	37.20 (4.80)
1989	58.60 (15.60)	33.40 (5.80)	22.20 (3.40)	13.80 (3.00)	0.00 (0.00)	128.20 (24.00)
1990	57.00 (8.40)	54.20 (6.80)	22.80 (2.60)	21.80 (3.40)	0.52 (0.16)	154.40 (15.00)
1991	26.00 (2.80)	37.20 (2.80)	22.80 (2.10)	11.80 (1.40)	0.07 (0.07)	98.60 (5.20)
1992	58.50 (5.50)	42.60 (2.50)	36.90 (2.90)	17.60 (1.60)	0.07 (0.07)	155.60 (7.30)
1993	21.00 (3.60)	53.20 (4.80)	36.40 (13.80)	14.80 (1.90)	0.08 (0.08)	128.30 (8.60)
1994	25.10 (3.00)	39.90 (3.60)	40.70 (5.10)	15.00 (1.50)	0.09 (0.09)	122.30 (9.80)
1995	28.20 (3.50)	69.60 (3.90)	20.30 (1.30)	11.60 (1.40)	0.00 (0.00)	129.60 (6.80)
1996	16.20 (2.40)	41.00 (3.90)	49.80 (3.20)	16.00 (3.20)	0.10 (0.10)	122.60 (9.80)
1997	33.20 (6.30)	43.40 (4.00)	46.40 (1.80)	15.20 (1.80)	0.09 (0.09)	138.30 (7.70)
1998	20.00 (3.00)	26.40 (2.70)	30.50 (2.60)	21.70 (2.60)	0.40 (0.22)	98.70 (7.20)
1999	19.10 (2.80)	38.70 (3.20)	20.90 (3.00)	22.70 (2.60)	0.40 (0.29)	101.30 (7.10)
2000	17.70 (3.30)	33.10 (3.90)	16.10 (2.60)	10.50 (1.50)	0.53 (0.24)	77.50 (6.10)
2001	32.40 (4.10)	44.10 (3.70)	27.60 (3.60)	15.50 (2.70)	0.27 (0.18)	119.60 (8.30)
2002	33.70 (4.40)	22.30 (2.20)	12.80 (2.20)	9.60 (1.80)	0.53 (0.24)	78.40 (7.00)
2003	19.50 (2.90)	58.50 (4.80)	24.90 (2.20)	15.20 (2.10)	0.80 (0.43)	118.10 (9.20)
2004	14.10 (2.50)	26.70 (2.70)	42.90 (3.40)	13.20 (1.60)	0.27 (0.27)	96.90 (5.20)
2005	35.50 (5.90)	35.70 (4.90)	40.30 (4.30)	34.30 (3.40)	0.53 (0.41)	145.70 (12.70)
2006	20.30 (4.00)	39.60 (3.70)	20.30 (3.70)	16.50 (2.70)	0.27 (0.18)	96.70 (11.00)
2007	13.50 (2.50)	35.50 (4.10)	33.70 (3.60)	14.40 (2.40)	0.27 (0.18)	97.10 (9.10)
2008	13.90 (2.90)	30.10 (2.80)	33.60 (3.10)	22.50 (3.20)	0.00 (0.00)	100.13 (8.90)
2009	15.87 (3.48)	32.93 (3.57)	22.27 (2.53)	13.60 (2.05)	0.13 (0.13)	84.67 (6.90)
2010	45.73 (8.30)	36.27 (2.68)	49.73 (5.06)	16.40 (1.83)	0.27 (0.18)	148.13 (12.41)
2011	Sampling was not conducted due to extreme weather and lake conditions.					
2012	27.87 (3.98)	59.07 (5.95)	36.93 (3.04)	14.53 (1.16)	0.27 (0.18)	138.40 (8.57)

Dataset = cfdpstvl.d12 – .d84

Table 4. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in each area of Taylorsville Lake in 2012; confidence intervals are in parentheses.

Area	Species	No. ≥8.0 in	PSD	RSD_{15}
Big Beech	Largemouth bass	268	41 (± 6)	13 (± 4)
Ashes Creek	Largemouth bass	343	46 (± 5)	12 (± 3)
Van Buren	Largemouth bass	218	54 (± 7)	16 (± 5)
Total	Largemouth bass	829	47 (± 3)	13 (± 2)

Dataset = cfdpstvl.d12

Table 5. Population assessment for largemouth bass collected during spring electrofishing at Taylorsville Lake from 2000-2012 (scoring based on statewide assessments).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2012	Value	13.1*	28.13	36.93	14.53	0.27				
	Score	4	2	4	3	2			15	Good
2011	Value									
	Score			Sampling was not conducted due to extreme weather and lake conditions.						
2010	Value	13.1	49.53	49.73	16.40	0.27	0.574	43.7		
	Score	4	3	4	3	2			16	Good
2009	Value	12.9*	14.60	22.30	13.60	0.13				
	Score	4	1	2	3	1			11	Fair
2008	Value	12.9*	12.20	33.60	22.50	0.00				
	Score	4	1	3	4	0			12	Good
2007	Value	12.9*	10.30	33.70	14.40	0.27				
	Score	4	1	3	3	2			13	Good
2006	Value	12.9	17.50	20.30	16.50	0.27	0.824	56.1		
	Score	4	1	2	3	2			12	Good
2005	Value	12.6*	38.30	40.30	34.30	0.53				
	Score	4	3	4	4	2			17	Excellent
2004	Value	12.6*	14.90	42.90	13.20	0.27				
	Score	4	1	4	3	2			14	Good
2003	Value	12.6*	21.20	24.90	15.20	0.80				
	Score	4	2	2	3	2			13	Good
2002	Value	12.6	34.80	12.80	9.60	0.53	0.495	39.0		
	Score	4	2	1	2	2			11	Fair
2001	Value	10.8	20.50	27.60	15.50	0.27	0.539	41.7		
	Score	4	2	3	3	2			11	Fair
2000	Value	10.1	14.10	16.10	10.50	0.53	0.455	36.6		
	Score	4	1	2	2	2			8	Fair

* Age data not collected
^Calculations based on age data gathered in previous years
-Instantaneous and annual mortality not calculated in years where age and growth data are not collected

Table 6. Length distribution and CPUE (fish/hr) of largemouth bass collected in 4.5 hours of 15-minute electrofishing runs for black bass in Taylorsville Lake in September 2012: numbers in parentheses are standard errors.

	Inch class																		
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE
Van Buren																			
Largemouth bass	12	32	25	11	7	9	21	11	13	8	8	5	3	3				168	119.33 (18.37)
Ashes Creek																			
Largemouth bass	7	40	31	20	4	34	15	16	14	12	7	7	3	1			1	212	141.33 (15.79)
Big Beech Creek																			
Largemouth bass	5	24	20	8	3	18	22	9	11	14	14	14	9	1	5	1	1	179	112.00 (6.02)
Total																			
Largemouth bass	24	96	76	39	14	61	58	36	38	34	29	26	15	5	5	1	2	559	124.22 (8.38)

Dataset = cfdwrtvl.d12

Table 7. Numbers of fish and the relative weight (Wr) for each length group of largemouth bass collected at Taylorsville Lake on 20 and 21 September 2012. Standard errors are in parentheses.

Species	Area	Length group						Total	
		8.0–11.9 in		12.0–14.9 in		≥15.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Van Buren	3	86 (2)	13	100 (2)	6	97 (3)	22	98 (2)
	Ashes	79	84 (1)	26	87 (4)	5	86 (7)	110	85 (1)
	Big Beech	60	87 (2)	41	91 (2)	17	94 (3)	118	89 (1)
	Total	142	85 (1)	80	91(2)	28	93 (2)	250	88 (1)

Dataset = cfdwrtvl.d12

Table 8. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at Taylorsville Lake. Age 1 CPUE and standard error could not be calculated in 2010 due to prolonged flood conditions in spring.

Year class	Area	Age 0		Age 0		Age 0 ≥5.0 in		Age 1 (Natural)	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2001	Total	4.6	1.3	63.60	11.70	13.30	1.00	34.80	4.30
2002	Total	5.3	0.1	29.10	4.80	18.70	3.50	21.20	2.80
2003	Total	5.4	0.1	32.20	5.40	19.10	3.40	14.90	2.50
2004	Total	4.4	0.1	50.00	6.20	15.10	3.60	38.30	6.20
2005	Total	4.9	0.1	31.80	4.20	15.30	2.50	17.50	3.80
2006	Total	4.9	0.1	54.70	4.90	25.80	2.90	10.30	2.00
2007	Total	4.4	0.1	22.40	3.20	6.70	1.80	12.18	2.61
2008	Total	5.5	0.1	20.89	3.91	16.67	3.46	14.62	3.12
2009	Total	4.9	0.1	90.22	14.46	39.78	6.48	49.53	8.69
2010	Total	5.2	0.1	45.15	4.90	27.66	3.28	*	*
2011	Total	4.8	0.1	40.44	2.82	17.78	1.56	27.47	3.76
2012	Total	5.1	0.1	54.44	5.28	27.78	3.29		

Dataset = cfdwrtvl.d12

Table 9. Length distribution and CPUE (fish/nn) of each species of crappie collected at Taylorsville Lake in 48 net-nights during October 2012

Species	Inch class											Total	CPUE	Std. error
	3	4	5	6	7	8	9	10	11	12	13			
White crappie														
natural	1	30	20		3	4	12	3	2			75	1.56	0.34
2011					1	1						2	0.04	0.03
2010						1	1	1	1			4	0.08	0.04
2009											1	1	0.02	0.02
Total	1	30	20		4	6	13	4	3		1	82	1.71	0.34
Black crappie		4	6	96	287	58	12	10	3			476	9.92	2.63

Dataset = cfdtntvl.d12

Table 10. PSD and RSD_{10} values calculated for crappie electrofished from Taylorsville Lake during March 2012.

Species	No. ≥5.0 in	PSD	RSD_{10}
White crappie	246	96 (± 3)	31 (± 6)
Black crappie	397	96 (± 2)	50 (± 5)

Dataset = cfdpstvl.d12

Table 11. PSD and RSD_{10} values calculated for crappie collected at Taylorsville Lake in 48 net-nights during October 2012.

Species	No. ≥5.0 in	PSD	RSD_{10}
White crappie	51	53 (± 14)	16 (± 10)
Black crappie	472	18 (± 3)	3 (± 2)

Dataset = cfdtntvl.d12

Table 12. Mean back calculated lengths (in) at each annulus for otoliths from white crappie trap netted and gill netted at Taylorsville Lake in 2012.

		Age		
Year class	No.	1	2	3
2011	27	6.3		
2010	9	5.8	8.9	
2009	2	5.3	9.6	11.3
Mean	38	6.1	9.0	11.3
Smallest		4.4	7.9	10.6
Largest		8.1	10.5	11.9
Std Error		0.1	0.3	0.7
95% ConLo		5.9	8.5	9.9
95% ConHi		6.4	9.5	12.6

Intercept value = 0.00
Dataset = cfdagtvl.d12

Table 13. Age frequency and CPUE (fish/nn) per inch class of white crappie trap netted for 48 net-nights at Taylorsville Lake in 2012.

	Inch class														Std
Age	3	4	5	6	7	8	9	10	11	12	13	Total	%	CPUE	err
0+	1	30	20									51	62	1.06	0.30
1+					4	4	11	2	1			22	27	0.46	0.10
2+						2	2	2	2			7	9	0.15	0.04
3+									1		1	2	2	0.04	0.02
Total	1	30	20		4	6	13	4	3		1	82	100	1.71	0.34
(%)	1	37	24		5	7	16	5	4		1	100			

Dataset = cfdtntvl.d12 and cfdagtvl.d12
CPUE of ≥8.0 in white crappie = 0.56 ± 0.11 fish/nn; ≥10.0 in = 0.17 ± 0.06 fish/nn

Table 14. Population assessment for white crappie collected during fall trap netting at Taylorsville Lake from 2000-2012 (scoring based on statewide assessment). An asterisk represents years where no age-2 white crappie were sampled.

Year		CPUE age-1 and older	Mean length age-2+ at capture	CPUE ≥ 8.0 in	CPUE age-1+	CPUE age-0+	Total score	Assessment rating
2012	Value	0.65	10.1	0.56	0.46	1.06		
	Score	1	4	1	1	1	8	Fair
2011	Value	0.71	11.0	0.56	0.63	0.96		
	Score	1	4	1	1	1	8	Fair
2010	Value	0.42	9.5	0.31	0.35	0.98		
	Score	1	3	1	1	1	7	Poor
2009	Value	0.02	9.6*	0.02	0.02	0.17		
	Score	1	4	1	1	1	8	Fair
2008	Value	0.08	9.6*	0.08	0.08	0.06		
	Score	1	4	1	1	1	8	Fair
2007	Value	0.25	9.6*	0.25	0.00	0.04		
	Score	1	4	1	0	1	7	Poor
2006	Value	0.91	9.6	0.90	0.00	0.04		
	Score	1	4	1	0	1	7	Poor
2005	Value	3.19	9.6	1.54	2.65	0.00		
	Score	1	4	1	1	0	7	Poor
2004	Value	1.65	10.3	0.96	1.43	1.40		
	Score	1	4	1	1	1	8	Fair
2003	Value	1.81	10.1*	1.73	1.68	0.48		
	Score	1	4	1	1	1	8	Fair
2002	Value	1.59	10.1	1.53	0.60	0.73		
	Score	1	4	1	1	1	8	Fair
2001	Value	4.52	9.4	4.25	2.55	0.10		
	Score	1	3	2	1	1	8	Fair
2000	Value	6.50	8.6	6.25	0.46	0.54		
	Score	2	2	3	1	1	9	Fair

Table 15. Mean back calculated lengths (in) at each annulus for otoliths from black crappie trap netted at Taylorsville Lake in 2012.

		Age		
Year class	No.	1	2	3
2011	79	5.0		
2010	12	5.3	8.6	
2009	5	5.0	8.0	9.5
Mean	96	5.1	8.5	9.5
Smallest		3.3	7.7	8.7
Largest		7.2	9.7	10.1
Std Error		0.1	0.1	0.3
95% ConLo		4.9	8.2	9.0
95% ConHi		5.2	8.7	10.0

Intercept value = 0.00
Dataset = cfdagtvl.d12

Table 16. Age frequency and CPUE (fish/nn) per inch class of black crappie trap netted for 48 net-nights at Taylorsville Lake in 2012.

	Inch class											Std
Age	4	5	6	7	8	9	10	11	Total	%	CPUE	err
0+	4								4	1	0.08	0.06
1+		6	96	287	51	2	3	1	446	94	9.30	2.52
2+					7	8	5		20	4	0.41	0.11
3+						2	2	2	6	1	0.13	0.04
Total	4	6	96	287	58	12	10	3	476	100	9.92	2.63
%	1	1	20	60	12	3	2	1	100			

Dataset = cfdtntvl.d12 and cfdagtvl.d12

CPUE of ≥8.0 in black crappie = 1.73 ± 0.46 fish/net-night; ≥10.0 in = 0.27 ± 0.09 fish/net-night

Table 17. Population assessment for black crappie collected during fall trap netting at Taylorsville Lake from 2000-2012 (scoring based on statewide assessment). An asterisk represents years where no age-2 black crappie were sampled.

Year		CPUE age-1 and older	Mean length age-2 at capture	CPUE ≥8.0 in	CPUE age-1+	CPUE age-0+	Total score	Assessment rating
2012	Value	9.83	9.6	1.73	9.30	0..08		
	Score	2	4	1	3	1	11	Fair
2011	Value	0.75	9.8	0.46	0.46	2.52		
	Score	1	4	1	1	1	8	Fair
2010	Value	3.23	8.4	1.29	3.08	0.50		
	Score	1	1	1	2	1	6	Poor
2009	Value	0.23	9.8*	0.13	0.21	0.42		
	Score	1	4	1	1	1	8	Fair
2008	Value	0.56	9.8	0.54	0.16	0.42		
	Score	1	4	1	1	1	8	Fair
2007	Value	1.73	9.2	0.96	1.42	0.02		
	Score	1	3	1	1	1	7	Poor
2006	Value	3.33	9.5	3.29	0.13	0.48		
	Score	1	3	2	1	1	8	Fair
2005	Value	5.79	9.0	4.48	1.33	0.04		
	Score	2	2	2	1	1	8	Fair
2004	Value	12.04	9.3	1.17	11.73	1.17		
	Score	2	3	1	3	1	10	Fair
2003	Value	1.31	10.3	1.06	0.97	1.25		
	Score	1	4	1	1	1	8	Fair
2002	Value	2.24	10.2	1.63	1.75	0.14		
	Score	1	4	1	1	1	8	Fair
2001	Value	1.79	10.1	1.48	1.51	0.13		
	Score	1	4	1	1	1	8	Fair
2000	Value	0.79	9.6	0.73	0.45	0.15		
	Score	1	4	1	1	1	8	Fair

* Age data not collected

Table 18. Number of fish and the relative weight (Wr) for each length group of crappie at Taylorsville Lake in October 2012.

Species	Area	Length group						Total	
		5.0–7.9 in		8.0–9.9 in		≥10.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
White crappie	Total	24	99 (3)	19	99 (3)	8	99 (2)	51	99 (2)
Black crappie	Total	87	89 (1)	38	93 (2)	13	96 (3)	138	91 (1)

Dataset = cfdtntvl.d12

Table 19. Species composition, relative abundance, and CPUE (fish/hr) of crappie collected in 4.5 hours of 15-minute electrofishing runs in Taylorsville Lake, March 2012; numbers in parentheses are standard errors.

	Inch class													
Location/Species	3	4	5	6	7	8	9	10	11	12	13	14	Total	CPUE
Van Buren														
White crappie	1	3	1	1	8	15	32	11	8	1		1	82	54.67 (5.63)
Black crappie		4		1	5	11	14	10	2	3	1	1	52	34.67 (7.91)
Ashes/Jacks Creek														
White crappie						9	39	18	3	2			71	47.33 (12.37)
Black crappie					3	38	48	74	17	4	1		186	124.00 (9.74)
Big Beech Creek														
White crappie					1	14	49	26	5	1	1		97	64.67 (14.14)
Black crappie					6	27	46	69	11	3	1		163	108.67 (19.80)
Total														
White crappie	1	3	1	1	9	38	120	55	16	4	1	1	250	55.56 (6.38)
Black crappie		4		1	14	76	108	153	30	11	3	1	401	89.11 (11.97)

Dataset = cfdpstvl.d12

Table 20. Species composition, relative abundance, and CPUE (fish/hr) of crappie collected in 4.5 hours of 15-minute electrofishing runs in Taylorsville Lake, October 2012; numbers in parentheses are standard errors.

	Inch class									
Location/Species	5	6	7	8	9	10	11	12	Total	CPUE
Van Buren										
White crappie	1		1	5	14	23	5		49	32.67 (8.42)
Black crappie		7	40	61	21	3	6	2	140	93.33 (49.69)
Ashes/Jacks Creek										
White crappie			5	4	33	13	3		58	38.67 (9.16)
Black crappie		3	11	7	6	15	5	1	48	32.00 (10.01)
Big Beech Creek										
White crappie				4	21	22	11		58	38.67 (13.92)
Black crappie		22	41	23	24	56	38	7	211	140.67 (16.89)
Total										
White crappie	1		6	13	68	58	19		165	36.67 (5.89)
Black crappie		32	92	91	51	74	49	10	399	88.67 (19.91)

Dataset = cfdpstvl.d12

Table 21. Length distribution and CPUE (fish/nn) of white bass and hybrid striped bass collected during 12 net-nights of gill netting in Taylorsville Lake in October 2012: numbers in parentheses are standard errors.

	Inch class																		
Species	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE
White bass	1	19	9	2	20	12	6											69	5.75 (2.11)
Hybrid striped bass		7	11	2	2	7	7	1			1	1	1	2	2	2	1	47	3.92 (1.36)

Dataset = cfdgntvl.d12

Table 22. Mean back calculated lengths (in) at each annulus for otoliths from hybrid striped bass gill netted at Taylorsville Lake in 2012.

		Age			
Year class	No.	1	2	3	4
2011	14	7.2			
2010	2	9.6	15.1		
2009	7	11.0	16.2	19.1	
2008	1	12.5	17.6	20.0	21.6
Mean	24	8.7	16.1	19.2	21.6
Smallest		5.5	14.1	17.8	21.6
Largest		12.6	18.5	20.5	21.6
Std Error		0.5	0.4	0.4	
95% ConLo		7.8	15.3	18.4	
95% ConHi		9.6	16.9	20.0	

Intercept Value = 0.00
Dataset = cfdagtvl.d12

Table 23. Age frequency and CPUE (fish/nn) per inch class of hybrid striped bass gill netted for 12 net-nights at Taylorsville Lake in 2012.

	Inch class																			Std
Age	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	%	CPUE	Err
0+	7	11	2	1													21	45	1.75	0.73
1+				1	7	7	1										16	34	1.33	0.71
2+										1	1						2	4	0.17	0.11
3+												1	2	2	2		7	15	0.58	0.29
4+																1	1	2	0.08	0.08
Total	7	11	2	2	7	7	1			1	1	1	2	2	2	1	47	100	3.92	1.36
%	15	23	4	4	15	15	2			2	2	2	4	4	4	2	100			

Dataset = cfdagtvl.d12 and cfdgntvl.d12

Table 24. Number of fish and the relative weight (Wr) for each length group of hybrid striped bass collected at Taylorsville Lake in October 2012.

		Length group						Total	
Species	Area	8.0–11.9 in		12.0–14.9 in		≥15.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Hybrid striped bass	Total	22	87 (2)	8	80 (1)	10	81 (2)	40	84 (1)

Dataset = cfdgntvl.d12

Table 25. Population assessment for hybrid striped bass collected during fall gill netting at Taylorsville Lake from 2000-2012 (scoring based on statewide assessment).

Year		CPUE excluding age 0	Mean length age-2+ at capture	CPUE ≥15.0 in	CPUE age 1+	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2012	Value	2.17	17.0	0.83	1.33	-	-		
	Score	1	3	1	1			6	Fair
2011	Value	11.50	16.4	3.13	7.93	-	-		
	Score	3	2	2	3			10	Good
2010	Value	3.75	16.7	1.00	2.85	-	-		
	Score	1	2	1	2			6	Fair
2009	Value	11.38	15.7	0.88	10.38	1.104	66.9%		
	Score	3	1	1	4			9	Fair
2008	Value	0.56	17.1	0.38	0.19	0.370	30.9%		
	Score	1	3	1	1			6	Fair
2007	Value	16.75	16.2	10.75	6.00	0.798	55.0%		
	Score	3	2	4	3			12	Good
2006	Value	8.50	16.8	0.75	8.00	1.262	71.7%		
	Score	2	2	1	3			8	Fair
2005	Value	1.06	15.2	0.40	0.56	0.437	35.4%		
	Score	1	1	1	1			4	Poor
2004	Value	4.60	16.0	1.00	3.60	0.964	61.9%		
	Score	1	2	1	2			6	Fair
2003	Value	9.40	16.6	6.60	2.60	1.522	78.2%		
	Score	2	2	3	2			9	Fair
2002	Value	22.80	15.8	10.10	12.40	0.658	48.2%		
	Score	4	1	4	4			13	Good
2001	Value	13.30	16.0	2.00	11.10	1.437	76.2%		
	Score	3	2	1	4			10	Good
2000	Value	9.90	15.9	5.90	3.10	1.263	71.1%		
	Score	2	1	3	2			8	Fair

Table 26. Mean back calculated lengths (in) at each annulus for otoliths from white bass gill netted at Taylorsville Lake in 2012.

		Age			
Year class	No.	1	2	3	4
2011	25	8.3			
2010	8	6.9	10.4		
2009	5	7.1	9.9	11.6	
2008	1	7.2	10.4	11.1	12.3
Mean	39	7.8	10.2	11.5	12.3
Smallest		4.8	7.8	10.2	12.3
Largest		9.5	11.5	12.1	12.3
Std Error		0.2	0.3	0.3	
95% ConLo		7.4	9.7	10.9	
95% ConHi		8.3	10.8	12.1	

Intercept Value = 0.00
Dataset = cfdagtvl.d12

Table 27. Age frequency and CPUE (fish/nn) per inch class of white bass gill netted for 12 net-nights at Taylorsville Lake in 2012.

	Inch class										Std
Age	6	7	8	9	10	11	12	Total	%	CPUE	err
0+	1	19	9					29	42	2.42	0.86
1+				2	17	7		26	38	2.17	1.08
2+					2	4	2	8	12	0.67	0.34
3+					1	1	3	5	7	0.42	0.22
4+							1	1	1	0.08	0.05
Total	1	19	9	2	20	12	6	69	100	5.75	2.11
%	1	28	13	3	29	17	9	100			

Dataset = cfdagtvl.d12 and cfdgntvl.d12

Table 28. Number of fish and the relative weight (Wr) for each length group of white bass collected at Taylorsville Lake in October 2012.

		Length group							
Species	Area	6.0–8.9 in		9.0–11.9 in		≥12.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
White bass	Total	29	96 (1)	34	86 (1)	6	85 (5)	69	90 (1)

Dataset = cfdgntvl.d12

Table 29. Population assessment for white bass collected during fall gill netting at Taylorsville Lake from 2000-2012 (scoring based on statewide assessment).

Year		CPUE excluding age 0	Mean length age-2+ at capture	CPUE ≥12.0 in	CPUE age 1+	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2012	Value	3.33	11.3	0.50	2.17	1.037	64.5		
	Score	1	2	1	1			5	Poor
2011	Value	18.38	11.9	5.00	8.92	1.506	77.8		
	Score	3	2	3	3			11	Good
2010	Value	11.00	12.1	1.75	7.78	1.920	85.3		
	Score	3	3	1	3			10	Good
2009	Value	1.30	NS	0.10	1.10	1.030	64.3		
	Score	1	0	1	1			3	Poor
2008	Value	2.00	12.1	0.30	1.60	1.157	68.6		
	Score	1	3	1	1			6	Fair
2007	Value	6.40	11.7	0.80	4.60	1.102	66.8		
	Score	2	2	1	2			7	Fair
2006	Value	4.30	11.7	0.80	3.00	1.040	64.6		
	Score	1	2	1	2			6	Fair
2005	Value	5.00	11.6	1.20	1.80	1.054	65.2		
	Score	2	2	1	1			6	Fair
2004	Value	8.60	11.4	0.10	7.30	2.030	86.9		
	Score	2	2	1	3			8	Fair
2003	Value	6.90	11.7	2.00	3.50	0.944	61.1		
	Score	2	2	1	2			7	Fair
2002	Value	5.90	11.8	1.30	2.60	1.113	67.1		
	Score	2	2	1	2			7	Fair
2001	Value	23.50	12.1	6.80	14.91	0.971	62.1		
	Score	4	3	3	4			14	Excellent
2000	Value	20.80	12.2	8.10	7.40	0.766	53.5		
	Score	4	3	3	3			13	Good

Table 30. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected in 7.5 hours of 15-minute electrofishing runs in Herrington Lake, March 2012; numbers in parentheses are standard errors.

	Inch class																							
Location/Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total	CPUE
Upper																								
Largemouth bass		13	11	15	30	32	35	16	5	4	25	24	12	14	5	6	5	1	2				255	102.00 (7.50)
Spotted bass		2	1						1														4	1.60 (0.65)
Middle																								
Largemouth bass	1	1	10	40	88	180	182	51	23	61	75	40	26	10	7	9	4	3		1			812	324.80 (36.30)
Spotted bass						4	7	4	14	7	14		1										51	20.40 (4.36)
Lower																								
Largemouth bass			2	13	41	45	51	17	26	59	50	30	25	10	9	7	5	8	3	1		1	403	161.20 (32.77)
Spotted bass					2		2	4	2	3	11	1	1										26	10.40 (3.59)
Largemouth bass																								
Natural	1	14	23	68	159	257	268	83	51	101	144	93	63	34	21	22	14	12	5	2		1	1436	191.47 (23.03)
2010								1	3	23	6	1											34	4.53 (1.24)
Total																								
Largemouth bass	1	14	23	68	159	257	268	84	54	124	150	94	63	34	21	22	14	12	5	2		1	1470	196.00 (23.65)
Spotted bass		2	1		2	4	9	8	17	10	25	1	2										81	10.80 (2.32)

Dataset = cfdpsher.d12

Table 31. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Herrington Lake from 1994-2012; numbers in parentheses are standard errors.

	Length group					
Year	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	Total
1994	4.90 (0.90)	30.10 (4.40)	21.50 (2.60)	17.90 (1.80)	2.13 (0.50)	74.40 (5.40)
1995	8.80 (2.30)	20.00 (4.40)	25.60 (4.00)	20.40 (1.40)	3.20 (0.73)	74.80 (9.60)
1996	9.50 (2.40)	24.40 (3.90)	20.30 (2.80)	26.50 (2.60)	3.07 (0.68)	80.90 (6.70)
1997	15.60 (2.30)	19.90 (3.40)	27.30 (2.60)	22.00 (1.70)	2.93 (0.60)	84.80 (6.10)
1998	37.20 (3.80)	45.30 (4.10)	30.90 (2.50)	21.30 (2.20)	1.87 (0.57)	134.80 (7.20)
1999	43.20 (5.20)	69.07 (6.65)	40.40 (3.90)	21.60 (2.40)	1.07 (0.33)	174.27 (14.27)
2000	15.60 (3.90)	53.50 (6.60)	26.93 (2.19)	12.27 (1.36)	0.27 (0.19)	108.30 (10.80)
2001	37.10 (6.70)	40.10 (6.30)	34.13 (4.53)	12.53 (1.48)	0.53 (0.25)	123.90 (15.30)
2002	19.50 (2.60)	32.10 (4.70)	25.47 (3.54)	24.00 (2.18)	1.60 (0.53)	101.10 (9.70)
2003	20.80 (4.40)	23.90 (2.40)	30.10 (2.80)	17.90 (1.70)	1.20 (0.44)	92.70 (4.20)
2004	29.60 (5.50)	64.80 (12.20)	38.70 (5.70)	29.70 (3.40)	1.47 (0.41)	162.80 (23.90)
2005	70.90 (9.70)	59.60 (7.10)	23.50 (3.00)	22.30 (3.40)	0.80 (0.35)	176.30 (15.40)
2006	24.70 (4.80)	36.70 (4.80)	38.40 (3.80)	19.30 (1.80)	0.40 (0.22)	119.10 (9.20)
2007	78.10 (10.40)	68.80 (7.30)	20.00 (2.50)	17.30 (2.30)	0.53 (0.32)	184.30 (17.10)
2008	31.33 (2.90)	39.73 (4.57)	29.47 (3.00)	22.13 (3.05)	1.47 (0.45)	122.67 (8.61)
2009	5.25 (1.20)	9.38 (1.14)	15.25 (2.20)	10.75 (1.43)	0.38 (0.21)	40.63 (4.40)
2010	41.47 (4.40)	34.00 (4.43)	28.67 (3.18)	25.07 (2.30)	0.93 (0.31)	129.20 (10.23)
2011	24.53 (3.69)	22.67 (2.01)	10.93 (1.30)	10.80 (1.48)	0.27 (0.19)	68.93 (1.35)
2012	69.60 (10.12)	70.67 (10.87)	40.93 (4.62)	14.80 (2.08)	1.07 (0.50)	196.00 (23.65)

Dataset = cfdpsher.d12 - .d94

Table 32. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in each area of Herrington Lake in 2012; confidence intervals are in parentheses.

Area	Species	No. ≥8.0 in	PSD	RSD_{15}
Lower	Largemouth bass	302	49 (± 6)	15 (± 4)
Middle	Largemouth bass	492	36 (± 4)	7 (± 2)
Upper	Largemouth bass	154	61 (± 8)	21 (± 7)
Total	Largemouth bass	948	44 (± 3)	12 (± 2)

Dataset = cfdpsher.d12

Table 33. Population assessment for largemouth bass collected during spring electrofishing at Herrington Lake from 2000-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2012	Value	13.8*	111.73	40.93	14.80	1.07				
	Score	4	4	4	3	2			17	Excellent
2011	Value	13.8	18.65	10.93	10.80	0.27	0.539	41.7%		
	Score	4	1	1	2	2			10	Fair
2010	Value	13.7*	49.64^	28.67	25.07	0.93				
	Score	4	3	3	4	2			16	Good
2009	Value	13.7*	6.20^	15.25	10.75	0.38				
	Score	4	1	2	2	2			11	Fair
2008	Value	13.7*	34.57^	29.47	22.13	1.47				
	Score	4	2	3	4	2			15	Good
2007	Value	13.7	96.50	20.00	17.30	0.53	0.485	38.4%		
	Score	4	4	2	3	2			15	Good
2006	Value	13.7*	25.10^	38.40	19.30	0.40				
	Score	4	2	4	3	2			15	Good
2005	Value	13.7*	72.10^	23.50	22.30	0.80				
	Score	4	4	2	4	2			16	Good
2004	Value	13.7*	33.50^	38.70	29.70	1.50				
	Score	4	2	4	4	2			16	Good
2003	Value	13.7	20.90	30.10	17.90	1.20	0.498	39.2%		
	Score	4	2	3	3	2			14	Good
2002	Value	11.7*	16.70^	25.47	24.00	1.60				
	Score	3	1	3	4	3			14	Good
2001	Value	11.7	28.20	34.13	12.53	0.53	0.455	36.6%		
	Score	3	2	3	3	2			13	Good
2000	Value	11.0	13.10	26.93	12.27	0.27	0.620	46.2%		
	Score	1	1	3	3	2			10	Fair

* Age data not collected
^Calculations based on age data gathered in previous years
-Instantaneous and annual mortality not calculated in years where age and growth data are not collected

Table 34. Length distribution and CPUE (fish/hr) of black bass collected in 4.5 hours of 15-minute electrofishing runs in Herrington Lake in September 2012; numbers in parentheses are standard errors.

	Inch class																			
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE
Lower																				
Largemouth bass	3	4	7	9	14	6	6	3	2	5	6	9	2	7	7	2		2	94	62.67 (26.89)
Spotted bass		2	6		1					1		1							11	7.33 (1.91)
Middle																				
Largemouth bass	5	10	5	8	7	13	12	11	6	7	3	7	3	2	2	2		1	104	69.33 (19.94)
Spotted bass		2	1		1		1				1	2							8	5.33 (2.46)
Upper																				
Largemouth bass		3	16	20	24	7	5	7	7	12	6	3	10	12	8		6		146	97.33 (9.61)
Spotted bass							1					1							2	1.33 (0.84)
Total																				
Largemouth bass	8	17	28	37	45	26	23	21	15	24	15	19	15	21	17	4	6	3	334	76.44 (11.50)
Spotted bass		4	7		2		2			1	1	4							21	4.67 (1.18)

Dataset = cfdwrher.d12

Table 35. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Herrington Lake on 24, 26, and 27 September 2012. Standard errors are in parentheses.

Species	Area	Length group						Total	
		8.0–11.9 in		12.0–14.9 in		≥15.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Lower	16	85 (2)	17	91 (3)	18	90 (2)	51	89 (1)
	Middle	36	85 (1)	13	91 (2)	7	99 (3)	56	88 (1)
	Upper	31	93 (2)	19	97 (3)	26	101 (2)	76	97 (1)
	Total	83	88 (1)	49	93 (2)	51	97 (1)	183	92 (1)

Dataset = cfdwrher.d12

Table 36. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at Herrington Lake.

		Age 0		Age 0		Age 0 ≥5.0 in		Age 1 (Natural)	
Year class	Area	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2001	Total	4.5	0.1	18.30	2.90	5.90	0.90	16.70	2.20
2002	Total	4.6	0.2	9.80	2.00	4.90	1.20	20.90	4.30
2003	Total	4.6	0.1	51.10	6.00	27.30	5.30	33.50	6.00
2004	Total	4.9	0.1	15.60	3.00	9.00	2.10	72.10	9.50
2005	Total	5.3	0.1	24.20	5.10	16.90	4.50	25.10	4.90
2006	Total	4.8	0.1	40.90	5.80	20.40	4.30	96.50	11.60
2007	Total	5.1	0.1	8.00	2.50	5.30	1.90	34.57	3.00
2008	Total	5.1	0.1	25.78	4.94	13.78	3.69	6.20	1.22
2009	Total	4.7	0.1	109.78	16.16	55.11	15.45	49.64	5.37
2010	Total	5.8	0.1	22.00	3.38	17.56	3.28	26.64	3.57
2011	Total	5.8	0.1	54.53	7.78	43.79	6.73	111.73	17.67
2012	Total	5.4	0.1	33.56	6.24	21.78	4.91		

Table 37. Species composition, relative abundance, and CPUE (fish/hr) of crappie collected in 4.5 hours of 15-minute electrofishing runs in Herrington Lake, March 2012; numbers in parentheses are standard errors.

	Inch class												
Location/Species	3	4	5	6	7	8	9	10	11	12	13	Total	CPUE
Upper													
White crappie	1				7	8	38	85	28	4	1	176	114.67 (24.32)
Black crappie							1		2			3	2.00 (0.89)
Middle													
White crappie				1	2	13	34	75	21	2		148	98.67 (19.56)
Black crappie					1	1	3	2	8	2	1	18	12.00 (3.72)
Lower													
White crappie								2	2			4	2.67 (1.33)
Black crappie						1	4	8	17	5		35	23.33 (8.35)
Total													
White crappie	1			1	9	21	72	162	51	6	1	324	72.00 (15.48)
Black crappie					1	2	8	10	27	7	1	56	12.44 (3.57)

Dataset = cfdpsher.d12

Table 38. PSD and RSD_{10} values calculated for crappie electrofished from Herrington Lake during March 2012.

Species	No. ≥5.0 in	PSD	RSD_{10}
White crappie	323	97 (± 3)	68 (± 5)
Black crappie	56	98 (± 3)	80 (± 11)

Dataset = cfdpsher.d12

Table 39. Mean back calculated lengths (in.) at each annulus for otoliths from white crappie electrofished at Herrington Lake in 2012.

		Age					
Year class	No.	1	2	3	4	5	6
2011	1	3.9					
2010	18	4.4	8.1				
2009	28	4.6	8.6	10.4			
2008	5	4.8	8.2	9.9	11.5		
2007	1	5.1	9.3	10.9	11.8	12.3	
2006	2	5.6	9.5	10.8	11.8	12.5	13.2
Mean	55	4.6	8.4	10.4	11.6	12.4	13.2
Smallest		3.4	6.4	7.7	10.2	12.2	12.9
Largest		6.9	10.2	12.2	12.3	12.8	13.4
Std Error		0.1	0.1	0.2	0.2	0.2	0.3
95% ConLo		4.4	8.2	10.1	11.2	12.1	12.7
95% ConHi		4.8	8.7	10.7	12.1	12.8	13.6

Intercept value = 0.00
Dataset = cfdagher.d12

Table 40. Age frequency and CPUE (fish/hr) per inch class of white crappie electrofished at Herrington Lake in 2012.

	Inch class														Std
Age	3	4	5	6	7	8	9	10	11	12	13	Total	%	CPUE	err
1	1											1	0	0.22	0.22
2				1	9	18	26					55	17	12.12	3.03
3						3	46	151	36	2		237	73	52.63	11.30
4								11	15	2		28	9	6.13	1.39
5										2		2	0	0.33	0.11
6										2	1	3	1	0.56	0.28
Total	1	0	0	1	9	21	72	162	51	6	1	324	100	72.00	15.48
(%)	0	0	0	0	3	6	22	50	16	2	0	100			

Dataset = cfdpsher.d12 and cfdagher.d12
CPUE of ≥8.0 in white crappie = 69.56 ± 15.01 fish/hr; ≥10.0 in = 48.89 ± 10.32 fish/hr

Table 41. Population assessment for white crappie collected during spring electrofishing at Herrington Lake from 2003-2012 (scoring based on lake-specific assessment).

Year		Total CPUE	Mean length age-2 at capture	Spring CPUE ≥8.0 in	Spring CPUE ≥10.0 in	CPUE age-2	Total score	Assessment rating
2012	Value	72.00	8.0	69.56	48.89	12.12		
	Score	4	1	4	4	2	15	Good
2011	Value	78.44	8.3	68.22	7.33	72.79		
	Score	4	1	4	3	4	16	Good
2010	Value	27.11	9.1	14.89	8.00	8.43		
	Score	2	3	1	3	1	10	Fair
2009	Value	17.00	9.1	17.00	9.50	7.60		
	Score	1	3	2	4	1	11	Fair
2008	Value	15.80	9.3	15.60	5.30	12.50		
	Score	1	4	1	2	1	9	Fair
2007	Value	6.90	9.2	6.20	3.10	3.80		
	Score	1	4	1	1	1	8	Fair
2006	Value	11.60	8.9	11.30	10.20	0.70		
	Score	1	3	1	4	1	10	Fair
2005	Value	34.20	8.9	29.60	7.80	28.40		
	Score	2	3	2	3	2	12	Fair
2004	Value	27.60	8.4	21.10	5.80	23.10		
	Score	2	1	2	2	2	9	Fair
2003	Value	10.20	8.7	7.70	5.00	4.00		
	Score	1	2	1	2	1	7	Poor

Table 42. Mean back calculated lengths (in.) at each annulus for otoliths from black crappie electrofished at Herrington Lake in 2012.

		Age					
Year class	No.	1	2	3	4	5	6
2011	2	6.3					
2010	11	5.2	9.4				
2009	19	5.1	9.2	11.3			
2008	6	4.5	9.5	11.5	12.6		
2006	1	5.0	6.5	6.9	7.4	7.9	9.7
Mean	39	5.1	9.2	11.2	11.8	7.9	9.7
Smallest		3.8	6.5	6.9	7.4	7.9	9.7
Largest		7.2	10.4	12.3	13.2	7.9	9.7
Std Error		0.1	0.1	0.2	0.8		
95% ConLo		4.9	8.9	10.8	10.3		
95% ConHi		5.4	9.5	11.5	13.3		

Intercept value = 0.00
Dataset = cfdagher.d12

Table 43. Age frequency and CPUE (fish/hr) per inch class of black crappie collected during 4.5 hours of electrofishing at Herrington Lake in 2012.

	Inch class										Std
Age	7	8	9	10	11	12	13	Total	%	CPUE	err
1	1							1	1	0.11	0.11
2	1	2	7	3				12	22	2.75	0.94
3				7	27	2		36	65	8.11	2.61
4						5	1	6	10	1.26	0.55
5								0			
6			1					1	2	0.22	0.10
Total	1	2	8	10	27	7	1	56	100	12.44	3.57
%	2	4	14	18	48	13	2	100			

Dataset = cfdpsher.d12 and cfdagher.d12
CPUE of ≥8.0 in black crappie = 12.22 ± 3.55 fish/hr; ≥10.0 in = 10.00 ± 3.12 fish/hr

Table 44. Population assessment for black crappie collected during spring electrofishing at Herrington Lake from 2003-2012 (scoring based on lake-specific assessment).

Year		Total CPUE	Mean length age-2 at capture	Spring CPUE ≥8.0 in	Spring CPUE ≥10.0 in	CPUE age-2	Total score	Assessment rating
2012	Value	12.44	9.3	12.22	10.00	2.75		
	Score	2	3	2	3	1	11	Fair
2011	Value	12.44	8.8	11.33	8.00	6.10		
	Score	2	3	2	3	1	11	Fair
2010	Value	22.89	8.1	13.11	3.56	19.70		
	Score	2	1	2	1	2	8	Fair
2009	Value	7.80	9.1	7.50	4.50	3.10		
	Score	1	3	1	2	1	8	Fair
2008	Value	8.20	9.5	8.20	4.00	5.00		
	Score	1	4	1	2	1	9	Fair
2007	Value	11.10	9.4	10.20	4.40	8.70		
	Score	2	4	2	2	2	12	Good
2006	Value	7.10	9.2	6.70	5.80	1.00		
	Score	1	3	1	2	1	8	Fair
2005	Value	47.30	8.9	39.30	13.80	45.00		
	Score	4	3	4	4	4	19	Excellent
2004	Value	6.70	9.0	6.10	5.20	1.30		
	Score	1	3	1	2	1	8	Fair
2003	Value	3.00	8.0	2.20	1.70	1.00		
	Score	1	1	1	1	1	5	Poor

Table 45. Length distribution and CPUE (fish/nn) of white bass and hybrid striped bass collected during 17 net-nights of gill netting in Herrington Lake in October 2012: numbers in parentheses are standard errors.

	Inch class																		
Species	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE
White bass	1	25	13	1	2	65	30	21	37	10	2							207	12.18 (3.13)
Hybrid striped bass	1	1	2	4	4				1	1	9	2	1	1	2		1	30	1.76 (0.57)

Dataset = cfdgnher.d12

Table 46. Mean back calculated lengths (in.) at each annulus for otoliths from hybrid striped bass gill netted at Herrington Lake in 2012.

		Age		
Year class	No.	1	2	3
2011	13	12.6		
2010	3	12.7	17.5	
2009	2	12.9	18.0	20.1
Mean	18	12.7	17.7	20.1
Smallest		8.8	16.4	19.0
Largest		14.0	18.8	21.2
Std Error		0.3	0.4	1.1
95% ConLo		12.2	16.9	18.0
95% ConHi		13.2	18.5	22.3

Intercept Value = 0.00
Dataset = cfdagher.d12

Table 47. Age frequency and CPUE (fish/nn) per inch class of hybrid striped bass gill netted for 17 net-nights at Herrington Lake in 2012.

	Inch class																			Std
Age	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	%	CPUE	err
0+	1	1	2	4	4													12	40	0.71	0.34
1+									1	1	9	2						13	43	0.76	0.42
2+													1	1	1			3	10	0.18	0.09
3+															1		1	2	7	0.12	0.07
Total	1	1	2	4	4				1	1	9	2	1	1	2		1	30	100	1.76	0.57
%	3	3	7	13	13				3	3	30	7	3	3	7		3	100			

Dataset = cfdagher.d12 and cfdgnher.d12

Table 48. Number of fish and the relative weight (Wr) for each length group of hybrid striped bass collected at Herrington Lake in October 2012.

		Length group							
Species	Area	8.0–11.9 in		12.0–14.9 in		≥15.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Hybrid striped bass	Total	10	88 (2)	1	91	17	88 (1)	28	88 (1)

Dataset = cfdgnher.d12

Table 49. Population assessment for hybrid striped bass collected during fall gill netting at Herrington Lake from 2000-2012 (scoring based on statewide assessments).

Year		CPUE excluding age 0	Mean length age-2+ at capture	CPUE ≥15.0 in	CPUE age 1+	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2012	Value	1.06	19.6	1.00	0.76	-	-		
	Score	1	4	1	1			7	Fair
2011	Value	5.34	19.7	5.33	3.67	-	-		
	Score	2	4	3	2			11	Good
2010	Value	5.27	20.0	4.67	4.93	1.211	70.2		
	Score	2	4	2	2			10	Good
2009	Value	2.67	19.3	2.67	2.06	1.109	66.3		
	Score	1	4	2	1			8	Fair
2008	Value	6.00	20.2	6.00	3.56	0.912	59.8		
	Score	2	4	3	2			11	Good
2007	Value	6.19	20.6	4.94	5.63	1.122	67.4		
	Score	2	4	2	3			11	Good
2006	Value	1.31	21.4	1.25	4.00	0.633	46.9		
	Score	1	4	1	2			8	Fair
2005	Value	0.42	19.5	0.42	0.25	NA	NA		
	Score	1	4	1	1			7	Fair
2004	Value	2.50	20.8	2.17	0.11	NA	NA		
	Score	1	4	1	1			7	Fair
2003	Value	3.06	19.8	2.94	1.13	0.601	45.2		
	Score	1	4	2	1			8	Fair
2002	Value	8.17	20.8	7.00	3.60	0.770	53.7		
	Score	2	4	3	2			11	Good
2001	Value	4.70	20.1	4.70	0.80	NA	NA		
	Score	1	4	2	1			8	Fair
2000	Value	8.88	18.9	8.90	5.50	1.282	72.3		
	Score	2	4	3	3			12	Good

Table 50. Mean back calculated lengths (in.) at each annulus for otoliths from white bass gill netted at Herrington Lake in 2012.

		Age					
Year class	No.	1	2	3	4	5	6
2011	89	9.8					
2010	32	9.7	12.9				
2009	32	9.0	12.5	13.9			
2008	9	8.9	12.5	13.9	14.7		
2007	1	8.2	11.4	12.7	13.6	14.1	
2006	1	9.7	12.7	14.7	15.4	15.9	16.2
Mean	121	9.5	12.7	13.9	14.6	15.0	16.2
Smallest		4.5	11.0	12.7	13.6	14.1	16.2
Largest		11.4	14.3	15.3	16.2	15.9	16.2
Std Error		0.1	0.1	0.1	0.3	0.9	
95% ConLo		9.4	12.5	13.7	14.1	13.3	
95% ConHi		9.7	12.8	14.0	15.2	16.8	

Intercept Value = 0.00
Dataset = cfdagher.d12

Table 51. Age frequency and CPUE (fish/nn) per inch class of white bass gill netted for 17 net-nights at Herrington Lake in 2012.

	Inch class														Std
Age	6	7	8	9	10	11	12	13	14	15	16	Total	%	CPUE	érr
0+	1	25	13	1								40	19	2.35	1.78
1+					2	64	24	2				92	44	5.41	1.53
2+						1	6	10	13	2		32	15	1.88	0.46
3+								9	19	4		32	15	1.88	0.45
4+									4	4	1	9	4	0.53	0.14
5+									1			1	0	0.06	0.02
6+											1	1	0	0.06	0.04
Total	1	25	13	1	2	65	30	21	37	10	2	207	100	12.18	3.13
%	0	12	6	0	1	31	14	10	18	5	1	100			

Dataset = cfdagher.d12 and cfdgnher.d12

Table 52. Number of fish and the relative weight (Wr) for each length group of white bass collected at Herrington Lake in October 2012.

		Length group							
Species	Area	6.0–8.9 in		9.0–11.9 in		≥12.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
White bass	Total	39	101 (1)	68	89 (1)	100	89 (1)	207	92 (1)

Dataset = cfdgnher.d12

Table 53. Population assessment for white bass collected during fall gill netting at Herrington Lake from 2000-2012 (scoring based on statewide assessment).

Year		CPUE excluding age 0	Mean length age-2+ at capture	CPUE ≥12.0 in	CPUE age 1+	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2012	Value	9.82	13.7	5.88	5.41	0.975	62.3		
	Score	2	4	3	3			12	Good
2011	Value	10.79	13.7	9.17	4.36	0.877	58.4		
	Score	3	4	3	2			12	Good
2010	Value	7.87	13.6	4.00	6.20	1.351	74.1		
	Score	2	4	2	3			11	Good
2009	Value	3.44	13.1	2.33	2.67	0.900	59.3		
	Score	1	4	1	2			8	Fair
2008	Value	6.72	13.3	5.83	2.06	0.717	51.2		
	Score	2	4	3	1			10	Good
2007	Value	5.60	13.6	3.81	2.94	0.722	51.4		
	Score	2	4	2	2			10	Good
2006	Value	1.88	13.9	1.31	0.88	*	*		
	Score	1	4	1	1			7	Fair
2005	Value	2.08	13.5	2.00	0.17	0.371	31.0		
	Score	1	4	1	1			7	Fair
2004	Value	10.06	13.9	6.72	9.20	0.726	51.6		
	Score	3	4	3	3			13	Good
2003	Value	2.50	14.1	1.94	0.56	0.381	31.7		
	Score	1	4	1	1			7	Fair
2002	Value	2.90	14.1	2.42	2.02	0.841	56.9		
	Score	1	4	1	1			7	Fair
2001	Value	1.90	14.0	1.80	1.06	0.418	34.2		
	Score	1	4	1	1			7	Fair
2000	Value	3.50	13.9	2.75	2.00	0.741	52.4		
	Score	1	4	2	1			8	Fair

Table 54. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected in 3.0 hours of 15-minute electrofishing runs in Guist Creek Lake, April 2012; numbers in parentheses are standard errors.

Species	Inch class																				Total	CPUE
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
Largemouth bass																						
Natural	10	8	14	10	10	65	74	58	47	38	35	17	11	30	16	21	18	7	6	1	496	165.33 (6.65)
2011		2	4																		6	2.18 (0.99)
2010					1	1															2	06.7 (0.45)
Total																						
Largemouth bass	10	10	18	10	11	66	74	58	47	38	35	17	11	30	16	21	18	7	6	1	504	168.00 (7.19)

Dataset = cfdpsgcl.d12

Table 55. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Guist Creek Lake from 1992-2012. Numbers in parentheses are standard errors.

	Length group					
Year	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	Total
1992	12.00 (2.10)	16.80 (2.70)	38.40 (5.20)	41.20 (4.70)	3.20 (1.00)	108.40 (7.20)
1993	22.70 (2.60)	25.50 (2.70)	23.80 (2.70)	51.60 (5.00)	5.47 (1.07)	123.60 (9.10)
1994	19.20 (2.70)	29.80 (3.70)	19.60 (2.60)	40.20 (3.90)	2.00 (0.54)	108.80 (8.60)
1995	18.20 (3.00)	40.60 (3.80)	23.20 (2.40)	47.20 (5.50)	5.00 (1.33)	129.20 (9.20)
1996	32.60 (5.50)	28.80 (3.60)	44.80 (2.80)	58.20 (5.20)	5.80 (1.10)	164.40 (10.60)
1997			NS			
1998	20.30 (3.10)	45.30 (4.90)	18.70 (3.50)	72.70 (12.30)	5.00 (1.31)	157.00 (14.50)
1999	53.50 (6.90)	56.80 (10.20)	41.70 (6.30)	51.30 (3.40)	7.95 (1.30)	203.30 (19.40)
2000	26.70 (6.10)	19.30 (2.40)	23.00 (2.90)	41.30 (5.40)	3.00 (1.00)	110.30 (7.60)
2001	39.00 (5.30)	42.00 (3.60)	17.30 (2.70)	46.30 (5.20)	1.67 (0.59)	144.70 (10.10)
2002	43.30 (9.90)	32.30 (7.70)	23.30 (3.10)	41.30 (7.80)	2.00 (1.35)	134.30 (18.60)
2003	27.70 (6.70)	96.70 (9.90)	31.00 (4.60)	49.70 (4.00)	2.67 (0.90)	205.00 (19.70)
2004	30.70 (6.00)	62.70 (6.50)	58.00 (7.00)	54.30 (5.90)	3.67 (1.04)	205.70 (17.00)
2005	84.30 (12.20)	67.00 (6.30)	63.00 (5.60)	70.30 (7.50)	4.67 (1.38)	284.70 (25.60)
2006	30.00 (6.60)	69.30 (8.20)	30.30 (3.30)	68.70 (6.40)	3.33 (1.46)	198.30 (19.00)
2007	23.30 (3.00)	59.30 (6.30)	42.00 (4.30)	58.00 (5.50)	3.67 (1.15)	182.70 (11.60)
2008	24.00 (3.62)	19.67 (2.28)	41.33 (5.56)	73.00 (10.31)	4.67 (1.46)	158.00 (12.89)
2009	12.00 (2.65)	23.33 (4.69)	19.33 (3.65)	35.67 (5.96)	4.33 (1.04)	90.33 (11.33)
2010	46.83 (4.07)	25.33 (2.57)	26.33 (2.86)	47.33 (4.59)	3.00 (0.77)	145.83 (8.43)
2011	34.33 (2.63)	67.67 (7.01)	35.00 (3.88)	50.33 (4.71)	5.33 (1.58)	187.33 (9.71)
2012	19.67 (5.17)	81.67 (7.54)	30.00 (4.13)	36.67 (3.81)	4.67 (1.19)	168.00 (7.19)

Dataset = cfdpsgcl.d12 – d92

Table 56. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Guist Creek Lake in 2012; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD_{15}
Largemouth bass	445	45 (± 5)	25 (± 4)

Dataset = cfdpsgcl.d12

Table 57. Population assessment for largemouth bass collected during spring electrofishing at Guist Creek Lake from 2000-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2012	Value	11.0*	13.33	30.00	36.67	4.67				
	Score	3	1	2	4	4			14	Good
2011	Value	11.0*	16.44	34.67	50.67	5.67				
	Score	3	2	2	4	4			15	Good
2010	Value	11.0*	31.50^	26.33	47.33	3.00				
	Score	3	2	2	4	3			14	Good
2009	Value	11.0	6.67	19.33	35.67	4.33	0.341	28.9		
	Score	3	1	1	4	4			13	Good
2008	Value	11.5*	8.13^	41.33	73.00	4.67				
	Score	4	1	3	4	4			16	Good
2007	Value	11.5*	15.50^	42.00	58.00	3.67				
	Score	4	1	3	4	3			15	Good
2006	Value	11.5*	15.20^	30.30	68.70	3.33				
	Score	4	1	2	4	3			14	Good
2005	Value	11.5	21.37	63.00	70.33	4.67	0.510	40.0		
	Score	4	2	4	4	4			18	Excellent
2004	Value	10.2*	22.10^	58.00	54.33	3.67				
	Score	2	2	4	4	3			15	Good
2003	Value	10.2*	16.30^	31.00	49.67	2.67				
	Score	2	2	2	4	3			13	Good
2002	Value	10.2*	23.80^	23.30	41.30	2.00				
	Score	2	2	2	4	3			13	Good
2001	Value	10.2	25.70	17.30	46.30	1.70	0.289	25.1		
	Score	2	2	1	4	2			11	Fair
2000	Value	10.0	16.80	23.00	41.30	3.00	0.161	14.9		
	Score	1	2	2	4	3			10	Good

* Age data not collected
^Calculations based on age data gathered in previous years
-Instantaneous and annual mortality not calculated in years where age and growth data are not collected

Table 58. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Guist Creek Lake in September 2012: numbers in parentheses are standard errors.

	Inch class																					
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Largemouth bass	2	31	25	10	2	19	19	14	30	43	21	30	9	14	15	11	1	2		1	299	199.33 (16.86)

Dataset = cfdwrgcl.d12

Table 59. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Guist Creek Lake on 19 September 2012. Standard errors are in parentheses.

Species	Area	Length group						Total	
		8.0–11.9 in		12.0–14.9 in		≥15.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Total	84	93 (1)	55	97 (1)	44	102 (2)	183	96(1)

Dataset = cfdwrgcl.d12

Table 60. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at Guist Creek Lake.

Year class	Area	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2000	Total	3.6	0.1	19.50	4.00	0.00		25.70	5.30
2001	Total	3.9	0.1	65.30	14.00	1.00	0.50	23.80	6.70
2002	Total	4.7	0.1	47.30	7.60	19.30	2.80	16.30	3.30
2003	Total	4.0	0.1	30.70	8.20	6.00	2.00	22.10	4.80
2004	Total	4.0	0.1	40.70	6.00	0.70	0.70	21.40	4.20
2005	Total	4.5	0.1	24.50	4.40	5.00	2.00	15.20	4.50
2006	Total	3.9	0.1	50.70	8.50	10.00	4.20	15.50	2.20
2007	Total	3.8	0.2	12.70	4.20	2.70	1.70	8.13	1.99
2008	Total	3.2	0.1	139.33	23.58	0.67	0.67	6.67	2.38
2009	Total	3.7	0.1	51.33	9.77	0.67	0.67	31.50	3.13
2010	Total	4.9	0.1	41.33	4.22	18.67	1.98	16.44	1.60
2011	Total	4.4	0.1	34.67	13.17	7.33	3.92	13.33	4.16
2012	Total	4.1	0.1	46.00	7.92	7.33	3.17		

Table 61. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 2.00 hours of 15-minute electrofishing runs in Beaver Lake, April 2012; numbers in parentheses are standard errors.

	Inch class																				
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Largemouth bass	14	67	65	38	10	14	43	47	59	56	54	37	12	4	5	1	1	2	3	532	266.00 (12.51)

Dataset = cfdpsbvr.d12

Table 62. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Beaver Lake from 1992-2012; numbers in parentheses are standard errors.

	Length group					
Year	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	Total
1992	7.10 (2.10)	105.30 (8.60)	4.90 (1.10)	19.10 (4.80)	9.33 (3.27)	136.40 (5.60)
1993	22.50 (3.90)	59.50 (5.30)	76.00 (7.90)	13.00 (4.30)	8.50 (2.77)	171.00 (12.20)
1994	22.50 (2.80)	5.50 (2.50)	41.50 (3.30)	28.50 (4.50)	6.50 (2.82)	96.50 (6.90)
1995	73.00 (8.40)	37.50 (5.90)	10.00 (3.80)	34.00 (7.00)	6.00 (2.27)	154.50 (9.90)
1996	81.00 (11.60)	47.00 (6.30)	8.00 (2.00)	37.50 (2.90)	3.00 (0.65)	173.50 (17.80)
1997	84.50 (12.20)	99.50 (16.70)	8.50 (2.10)	42.50 (9.60)	6.00 (3.21)	235.00 (34.10)
1998	36.00 (4.20)	206.50 (17.60)	14.50 (4.80)	30.50 (6.60)	5.50 (1.68)	287.50 (22.80)
1999	42.00 (11.00)	71.50 (7.30)	17.00 (2.60)	22.00 (3.50)	7.50 (1.59)	152.50 (18.10)
2000	56.00 (7.70)	26.50 (5.60)	28.50 (2.20)	24.50 (2.90)	3.00 (1.25)	137.00 (9.80)
2001	142.50 (8.60)	66.50 (8.60)	25.50 (1.50)	39.00 (6.10)	4.00 (1.51)	273.50 (17.10)
2002	55.50 (10.80)	97.00 (13.60)	16.00 (2.10)	32.00 (4.90)	2.50 (1.05)	200.50 (26.80)
2003	142.50 (9.10)	131.50 (12.90)	20.00 (3.00)	18.00 (2.40)	2.00 (0.76)	312.00 (20.40)
2004	154.50 (5.50)	198.00 (15.10)	48.00 (7.50)	17.00 (3.70)	2.00 (0.76)	417.50 (20.30)
2005	68.50 (11.40)	298.00 (22.70)	42.00 (7.70)	15.00 (3.50)	4.50 (1.40)	423.50 (21.60)
2006	115.00 (11.30)	217.50 (36.50)	40.00 (3.70)	10.00 (2.30)	2.50 (1.05)	382.50 (34.90)
2007	30.50 (4.80)	176.50 (31.10)	42.50 (9.60)	10.00 (2.70)	3.00 (1.00)	259.50 (40.40)
2008	44.50 (6.61)	203.50 (22.40)	61.00 (5.99)	8.50 (1.76)	2.00 (0.76)	317.50 (29.37)
2009	14.50 (2.82)	146.50 (28.53)	84.50 (15.57)	3.50 (2.06)	0.50 (0.50)	249.00 (45.32)
2010	76.67 (6.84)	99.78 (8.51)	58.89 (4.53)	2.89 (0.71)	0.22 (0.22)	238.22 (14.25)
2011	23.50 (5.83)	56.00 (8.18)	70.50 (5.90)	6.50 (1.50)	0.00 (0.00)	156.50 (13.74)
2012	97.00 (11.61)	81.50 (6.41)	73.50 (6.84)	14.00 (2.93)	2.50 (1.05)	266.00 (12.51)

Dataset = cfdpsbvr.d12 - .d92

Table 63. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Beaver Lake in 2012; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD_{15}
Largemouth bass	338	52 (± 5)	8 (± 3)

Dataset = cfdpsbvr.d12

Table 64. Population assessment for largemouth bass collected during spring electrofishing at Beaver Lake from 2000-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2012	Value	10.7*	94.50	73.50	14.00	2.50				
	Score	2	4	4	2	3			15	Good
2011	Value	10.7*	23.43	70.50	6.50	0.00				
	Score	2	2	4	2	0			10	Fair
2010	Value	10.7	76.67	58.89	2.89	0.22	0.293	25.4		
	Score	2	4	4	1	1			12	Good
2009	Value	10.3*	3.00^	84.50	3.50	0.50				
	Score	2	1	4	1	1			9	Fair
2008	Value	10.3*	23.00^	61.00	8.50	2.00				
	Score	2	2	4	2	3			13	Good
2007	Value	10.3	2.00	42.50	10.00	3.00	0.622	46.3		
	Score	2	1	3	2	3			11	Fair
2006	Value	10.7*	108.33^	40.00	10.00	2.50				
	Score	2	4	3	2	3			14	Good
2005	Value	10.7*	38.72^	42.00	15.00	4.50				
	Score	2	2	3	2	4			13	Good
2004	Value	10.7*	97.61^	48.00	17.00	2.00				
	Score	2	4	3	3	3			15	Good
2003	Value	10.7	133.17	20.00	18.00	2.00	0.540	41.7		
	Score	2	4	2	3	3			14	Good
2002	Value	11.7*	35.39^	16.00	32.00	2.50				
	Score	4	2	1	4	3			14	Good
2001	Value	11.7	47.78	25.50	39.00	4.00				
	Score	4	3	2	4	4			17	Excellent
2000	Value	10.7*	31.50^	30.00	24.50	3.00				
	Score	2	2	2	3	3			12	Good

* Age data not collected
^Calculations based on age data gathered in previous years
-Instantaneous and annual mortality not calculated in years where age and growth data are not collected

Table 65 Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Beaver Lake in September 2012: numbers in parentheses are standard errors.

	Inch class																			
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE
Largemouth bass	76	111	29	4	10	43	36	28	44	34	22	13	10	2	4			1	467	311.33 (24.80)

Dataset = cfdwrbvr.d12

Table 66. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Beaver Lake on 18 September 2012. Standard errors are in parentheses.

Species	Area	Length group						Total	
		8.0–11.9 in		12.0–14.9 in		≥15.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Total	102	86 (1)	61	83 (1)	23	88 (2)	186	85 (1)

Dataset = cfdwrbvr.d12

Table 67 Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at Beaver Lake.

Year class	Area	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2000	Total	3.7	0.1	127.30	32.90	6.70	2.20	47.80	5.70
2001	Total	4.6	0.1	139.30	28.10	40.70	13.90	35.40	8.90
2002	Total	4.4	0.1	104.00	7.50	19.30	4.60	133.20	9.30
2003	Total	3.7	0.1	117.30	22.00	0.00		97.60	5.00
2004	Total	3.7	0.1	86.70	17.10	3.30	1.60	38.70	10.70
2005	Total	4.0	0.03	199.30	26.30	18.70	4.10	108.30	10.20
2006	Total	4.3	0.1	8.00	2.70	0.00		2.00	1.10
2007	Total	4.6	0.1	175.30	31.20	46.70	4.60	23.50	4.37
2008	Total	3.4	0.1	21.33	11.94	0.00		4.50	1.40
2009	Total	5.0	0.1	112.67	21.89	56.67	10.65	76.67	6.84
2010	Total	4.0	0.1	38.67	14.11	4.67	2.17	23.43	5.41
2011	Total	4.2	0.05	142.00	23.86	18.00	4.10	94.50	11.07
2012	Total	4.3	0.04	124.57	24.57	17.71	3.99		

Table 68. Species composition, relative abundance, and CPUE (fish/hr) of bluegill and redear sunfish collected in 1.25 hours of 7.5-minute electrofishing runs in Beaver Lake, April 2012; numbers in parentheses are standard errors.

Species	Inch class									Total	CPUE
	2	3	4	5	6	7	8	9	10		
Bluegill	7	25	85	54	36	38				245	196.00 (32.05)
Redear sunfish				7	6	30	46	27	12	128	102.40 (14.05)

Dataset = cfdpsbvr.d12

Table 69. PSD and RSD values calculated for sunfish collected during 1.25 hours of electrofishing at Beaver Lake during April 2012. Fish were collected in 7.5-minute runs.

Species	No. ≥stock size	PSD	RSD[a]
Bluegill	238	31 (± 6)	
Redear sunfish	128	90 (± 5)	30 (± 8)

[a]Bluegill = RSD_8; Redear = RSD_9
Dataset = cfdpsbvr.d12

Table 70. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from Beaver Lake from 1992-2012; numbers in parentheses are standard errors.

	Length group				
Year	<3.0 in	3.0–5.9 in	6.0-7.9 in	≥8.0 in	Total
1992	1.30 (0.90)	54.20 (10.20)	80.90 (15.10)	0.00	136.40 (24.00)
1993	2.50 (1.10)	47.00 (6.20)	79.50 (10.00)	0.00	129.00 (12.60)
1994	2.50 (1.10)	130.00 (21.00)	20.00 (4.00)	0.00	152.50 (24.20)
1995	2.00 (1.10)	174.00 (18.40)	16.50 (4.70)	0.00	192.50 (17.30)
1996	0.50 (0.50)	184.50 (27.30)	65.50 (11.50)	0.00	250.50 (34.50)
1997	2.50 (1.10)	58.00 (12.60)	86.50 (14.40)	0.50 (0.50)	147.50 (27.40)
1998	0.50 (0.50)	28.00 (4.30)	88.00 (15.00)	0.50 (0.50)	117.00 (19.00)
1999	14.00 (4.50)	13.00 (5.50)	10.50 (3.00)	0.00	37.50 (8.30)
2000	50.00 (12.70)	322.00 (23.10)	32.00 (13.60)	7.50 (3.80)	411.50 (41.20)
2001	19.00 (5.10)	211.50 (16.00)	122.00 (15.20)	0.00	352.50 (20.20)
2002	5.60 (1.70)	175.20 (22.90)	152.80 (27.70)	0.00	333.60 (44.70)
2003	33.60 (6.40)	141.60 (17.50)	128.80 (21.90)	0.00	304.00 (30.10)
2004	36.00 (16.00)	118.40 (32.40)	143.20 (29.30)	0.00	297.60 (56.40)
2005	21.60 (4.50)	109.60 (14.60)	97.60 (19.30)	4.00 (2.20)	232.80 (19.70)
2006	20.10 (4.90)	60.90 (8.60)	55.70 (13.50)	8.30 (2.90)	145.10 (24.70)
2007	12.00 (2.60)	34.40 (4.60)	53.60 (9.50)	2.40 (1.70)	102.40 (10.40)
2008	69.60 (11.14)	112.40 (13.25)	38.00 (6.25)	4.00 (1.36)	224.00 (24.60)
2009	17.20 (5.10)	60.40 (9.99)	40.40 (5.88)	1.60 (0.94)	119.60 (15.26)
2010	35.60 (8.18)	134.80 (10.61)	24.40 (5.85)	4.40 (1.48)	199.20 (17.54)
2011	68.40 (20.28)	299.20 (47.80)	51.60 (8.14)	5.20 (1.86)	424.40 (70.41)
2012	5.60 (2.08)	131.20 (26.05)	59.20 (15.05)	0.00	196.00 (32.05)

Dataset = cfdpsbvr.d12 - .d92

Table 71. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from Beaver Lake in 2012.

		Age			
Year class	No.	1	2	3	4
2011	17	3.2			
2010	18	3.0	4.8		
2009	18	2.7	5.1	6.6	
2008	6	2.6	4.6	6.5	7.5
Mean	59	2.9	4.9	6.6	7.5
Smallest		1.6	4.0	5.6	7.2
Largest		4.4	6.9	8.8	7.8
Std Error		0.1	0.1	0.2	0.1
95% ConLo		2.8	4.7	6.3	7.3
95% ConHi		3.1	5.1	6.9	7.7

Intercept value = 0.00
Dataset = cfdagbvr.d12

Table 72. Age frequency and CPUE (fish/hr) per inch class of bluegill collected during 1.25 hours of electrofishing at Beaver Lake during May 2012. Fish were collected in 7.5-minute runs.

	Inch class									Std
Age	2	3	4	5	6	7	Total	%	CPUE	err
1	7	20	8				35	14	28.15	7.12
2		5	77	38	4		123	50	98.57	19.89
3				16	32	17	66	27	52.70	10.48
4						21	21	8	16.58	4.73
Total	7	25	85	54	36	38	245	100	196.00	32.05
%	3	10	35	22	15	16	100			

Dataset = cfdagbvr.d12 and cfdpsbvr.d12

Table 73. Population assessment for bluegill collected during spring electrofishing at Beaver Lake from 2001-2012 (scoring based on statewide assessments).

Year		Mean length age-2 at capture	Years to 6.0 in	CPUE ≥6.0 in	CPUE ≥8.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2012	Value	4.8	2-2+	59.20	0.00	-	-		
	Score	3	4	3	0			10	Fair
2011	Value	4.7	2-2+	56.80	5.20	0.834	55.6		
	Score	3	4	3	2			12	Good
2010	Value	4.5	3-3+	28.80	4.40	0.594	44.8		
	Score	3	3	2	1			9	Fair
2009	Value	4.8	3-3+	42.00	1.60	0.723	51.5		
	Score	3	3	2	1			9	Fair
2008	Value	4.2	3-3+	42.00	4.00	0.497	39.2		
	Score	2	3	2	1			8	Fair
2007	Value	3.7	3-3+	56.00	2.40	0.666	48.6		
	Score	2	3	3	1			9	Fair
2006	Value	3.4	3-3+	64.07	8.33	*	*		
	Score	1	3	3	2			9	Fair
2005	Value	4.0	3-3+	101.60	4.00	0.340	28.8		
	Score	2	3	4	1			10	Fair
2004	Value	3.9	3-3+	143.20	0.00	*	*		
	Score	2	3	4	0			9	Fair
2003	Value	3.9	3-3+	128.80	0.00	*	*		
	Score	2	3	4	0			9	Fair
2002	Value	3.9	2-2+	152.80	0.00	*	*		
	Score	2	4	4	0			10	Fair
2001	Value	4.5	2-2+	122.00	0.00	*	*		
	Score	3	4	4	0			11	Good

Table 74. Electrofishing CPUE (fish/hr) for each length group of redear sunfish collected from Beaver Lake from 1992-2012; numbers in parentheses are standard errors.

	Length group					
Year	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	≥10.0 in	Total
1992	0.40 (0.40)	10.20 (2.80)	90.20 (12.90)	1.80 (1.00)	0.40 (0.40)	102.70 (13.20)
1993	0.00	2.00 (1.50)	57.00 (10.70)	5.00 (2.00)	0.00	64.00 (12.20)
1994	0.00	6.50 (1.80)	8.00 (2.60)	2.50 (1.30)	0.00	17.00 (4.10)
1995	0.00	2.00 (1.10)	12.50 (3.60)	7.00 (2.70)	0.00	21.50 (5.20)
1996	0.00	6.00 (2.00)	5.50 (2.50)	8.00 (2.60)	0.00	19.50 (5.10)
1997	0.00	13.00 (1.80)	9.00 (2.10)	8.00 (1.70)	0.00	30.00 (1.50)
1998	0.00	3.50 (1.20)	9.00 (2.00)	9.50 (4.60)	0.00	22.00 (5.70)
1999	0.00	0.00	0.50 (0.50)	7.50 (1.80)	2.00 (1.10)	8.00 (2.00)
2000	1.00 (0.70)	5.50 (2.00)	3.50 (1.80)	6.00 (2.00)	1.50 (1.10)	16.00 (3.70)
2001	0.50 (0.50)	34.50 (6.90)	30.00 (6.80)	8.50 (2.90)	0.50 (0.50)	73.50 (10.50)
2002	0.00	49.60 (11.10)	77.60 (18.10)	7.20 (3.90)	0.80 (0.80)	134.40 (27.80)
2003	0.80 (0.80)	21.60 (6.10)	87.20 (15.00)	7.20 (3.30)	0.00	116.80 (20.00)
2004	0.00	38.40 (9.00)	44.00 (8.70)	26.40 (7.40)	0.00	108.80 (17.10)
2005	1.60 (1.10)	46.40 (7.00)	80.80 (12.40)	62.40 (10.80)	0.00	191.20 (22.60)
2006	0.40 (0.40)	46.10 (6.20)	82.20 (6.20)	35.70 (5.70)	0.00	164.40 (13.80)
2007	0.00	25.20 (6.10)	74.00 (13.50)	32.40 (6.60)	0.00	125.30 (23.20)
2008	10.00 (2.71)	15.20 (2.46)	58.40 (12.15)	90.40 (16.50)	0.00	174.00 (26.78)
2009	0.80 (0.55)	23.60 (4.77)	26.80 (4.76)	29.60 (5.75)	0.00	80.80 (11.47)
2010	0.40 (0.40)	21.60 (3.90)	27.60 (4.40)	33.60 (6.95)	1.20 (0.88)	83.20 (10.53)
2011	0.00	13.60 (3.39)	11.20 (2.04)	23.20 (4.89)	0.00	48.00 (6.30)
2012	0.00	5.60 (1.71)	28.80 (4.33)	68.00 (12.91)	9.60 (2.61)	102.40 (14.05)

Dataset = cfdpsbvr.d12 – .d92

Table 75 Mean back calculated lengths (in.) at each annulus for otoliths from redear sunfish collected from Beaver Lake in 2012.

		Age								
Year	No.	1	2	3	4	5	6	7	8	9
2010	13	4.0	6.2							
2009	14	3.3	5.8	7.5						
2008	6	2.9	5.8	7.7	8.7					
2007	4	3.3	5.4	8.0	9.3	9.9				
2006	2	3.0	5.1	6.6	8.1	9.4	10.0			
2005	3	3.3	5.6	7.0	8.3	8.8	9.5	9.9		
2004	1	2.5	5.5	7.1	7.9	8.3	8.7	9.6	9.8	
2003	2	2.5	4.6	6.2	7.0	7.6	8.2	8.9	9.4	9.8
Mean	63	3.4	5.8	7.4	8.5	9.0	9.2	9.5	9.6	9.8
Smallest		2.2	3.5	5.5	6.6	7.3	8.6	8.6	9.4	9.8
Largest		5.7	7.5	8.8	9.7	10.6	10.4	10.4	9.8	9.8
Std Error		0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.1	0.0
95% ConLo		3.2	5.5	7.0	8.1	8.5	8.6	9.0	9.3	9.8
95% ConHi		3.6	6.0	7.7	8.9	9.6	9.8	10.0	9.8	9.8

Intercept value = 0.00
Dataset = cfdagbvr.d12

Table 76. Age frequency and CPUE (fish/hr) per inch class of redear sunfish collected during 1.25 hours of electrofishing at Beaver Lake during May 2012. Fish were collected in 7.5-minute runs.

	Inch class									Std
Age	5	6	7	8	9	10	Total	%	CPUE	err
2	4	5	13				22	17	17.77	2.27
3	3	2	13	35			52	41	41.57	7.60
4			3	12	8		23	18	18.35	3.17
5					5	5	10	8	8.16	1.64
6					3	2	5	4	4.08	0.82
7					3	5	8	6	6.00	1.29
8					3		3	2	2.16	0.49
9					5		5	4	4.32	0.98
Total	7	6	30	46	27	12	128	100	102.40	14.05
%	5	5	23	36	21	9	100			

Dataset = cfdagbvr.d12 and cfdpsbvr.d12

Table 77. Population assessment for redear sunfish collected during spring electrofishing at Beaver Lake from 2001-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Years to 8.0 in	CPUE ≥8.0 in	CPUE ≥10.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2012	Value	7.5	3-3+	68.00	9.60	0.342	29.0		
	Score	4	4	4	4			16	Excellent
2011	Value	7.6	3-3+	23.20	1.60	0.398	32.8		
	Score	4	4	4	1			13	Good
2010	Value	7.5	4-4+	33.60	1.20	0.435	35.3		
	Score	4	3	4	1			12	Good
2009	Value	6.7	4-4+	29.60	0.00	0.413	33.9		
	Score	4	3	4	0			11	Good
2008	Value	6.3	4-4+	90.40	0.00	0.243	21.6		
	Score	3	3	4	0			10	Fair
2007	Value	6.4	4-4+	32.40	0.00	0.898	59.3		
	Score	3	3	4	0			10	Fair
2006	Value	5.7	4-4+	35.67	0.00	0.410	33.6		
	Score	2	3	4	0			9	Fair
2005	Value	6.4	4-4+	62.40	0.00	0.373	31.1		
	Score	3	3	4	0			10	Fair
2004	Value	6.6*	4-4+*	26.40	0.00				
	Score	4	3	4	0			11	Good
2003	Value	6.6	4-4+	7.20	0.00				
	Score	4	3	2	0			9	Fair
2002	Value	6.4*	3-3+*	7.20	0.80				
	Score	3	4	2	1			10	Fair
2001	Value	6.4	3-3+	8.50	0.50				
	Score	3	4	2	1			10	Fair

* Age data not collected

Table 78. Number of fish and the relative weight (Wr) for each length group of bluegill and redear sunfish collected at Beaver Lake on 18 September 2012. Standard errors are in parentheses.

Species	Length group								Total	
	No.	Wr	No.	Wr	No.	Wr	No.	Wr	No.	Wr
	3.0–5.9 in		6.0–7.9 in		≥8.0 in				Total	
Bluegill	84	96 (2)	41	85 (1)	0				125	92 (1)
	1.0–3.9 in		4.0–6.9 in		7.0–9.0 in		≥9.0 in		Total	
Redear sunfish	0		16	104 (2)	15	102 (2)	14	98 (2)	48	104 (3)

Dataset = cfdwrbvr.d12

Table 79. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 2.0 hours of 15-minute electrofishing runs in Boltz Lake, April 2012; numbers in parentheses are standard errors.

	Inch class																		
Species	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Largemouth bass	5	2	2	20	18	17	15	6	14	11	3	5	2	6	1	4	1	132	66.00 (4.90)

Dataset = cfdpsbol.d12

Table 80. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Boltz Lake from 1991-2012; numbers in parentheses are standard errors.

	Length group					
Year	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	Total
1991		43.60 (4.90)	10.80 (2.00)	6.50 (1.20)	0.00 (0.00)	60.80 (6.60)
1993	25.20 (6.40)	70.00 (4.80)	12.00 (2.30)	7.30 (2.20)	0.67 (0.67)	114.80 (8.90)
1994	48.40 (9.50)	45.00 (5.70)	32.40 (6.50)	3.60 (1.40)	1.00 (0.65)	129.60 (9.60)
1995	155.20 (10.80)	50.00 (3.30)	31.50 (3.90)	6.00 (1.70)	1.50 (1.05)	242.40 (10.40)
1997	34.80 (8.60)	183.60 (29.40)	36.80 (4.60)	14.40 (2.20)	1.78 (0.97)	268.80 (38.60)
1998	43.20 (6.00)	172.00 (18.80)	22.40 (3.30)	9.60 (2.20)	2.50 (0.73)	247.20 (24.80)
1999	87.20 (16.60)	369.60 (42.40)	90.40 (16.00)	12.80 (6.80)	4.80 (2.33)	560.00 (31.20)
2000	92.00 (30.40)	148.00 (7.70)	226.40 (18.40)	8.80 (2.90)	0.80 (0.80)	475.20 (16.80)
2001	24.00 (5.20)	212.80 (15.80)	133.60 (13.00)	9.60 (3.50)	0.00 (0.00)	380.00 (26.30)
2002	5.60 (2.70)	101.60 (20.10)	67.20 (11.40)	45.60 (9.20)	0.80 (0.80)	220.00 (27.30)
2003	10.70 (2.90)	39.30 (10.40)	61.30 (12.90)	40.00 (5.00)	0.00 (0.00)	151.30 (25.10)
2004	64.00 (12.90)	38.50 (4.90)	19.50 (4.40)	25.50 (5.90)	2.00 (0.76)	147.50 (22.90)
2005	69.00 (10.10)	39.50 (4.00)	21.00 (2.40)	20.00 (6.20)	0.00 (0.00)	149.50 (8.40)
2006	11.50 (1.40)	48.00 (4.70)	17.00 (3.70)	18.00 (2.90)	1.00 (0.65)	94.50 (9.90)
2007	28.50 (3.80)	37.00 (2.40)	17.00 (3.90)	20.00 (3.90)	1.00 (0.65)	102.50 (11.80)
2008	19.00 (2.24)	43.50 (7.27)	18.50 (2.13)	17.50 (3.02)	4.00 (1.51)	98.50 (7.09)
2009	10.00 (2.51)	39.50 (3.16)	22.00 (3.93)	29.50 (5.12)	4.00 (1.51)	101.00 (8.10)
2010	50.50 (5.63)	51.00 (4.88)	32.50 (4.37)	24.50 (2.44)	4.00 (1.31)	148.50 (10.70)
2011	13.00 (3.84)	55.50 (4.56)	33.00 (5.74)	19.00 (4.19)	3.50 (1.18)	120.50 (7.35)
2012	4.50 (1.18)	35.00 (3.98)	15.50 (2.77)	11.00 (2.48)	2.50 (1.50)	66.00 (4.90)

Dataset = cfdpsbol.d12 - .d91

Table 81. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Boltz Lake in 2012; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD_{15}
Largemouth bass	123	43 (± 9)	18 (± 7)

Dataset = cfdpsbol.d12

Table 82. Population assessment for largemouth bass collected during spring electrofishing at Boltz Lake from 2000-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2012	Value	10.7*	3.50	15.50	11.00	2.50				
	Score	2	1	1	2	3			9	Fair
2011	Value	10.7	8.56	33.00	19.00	3.50	0.378	31.5		
	Score	2	1	2	3	3			11	Fair
2010	Value	10.3	16.73	32.50	24.50	4.00	0.290	25.2		
	Score	2	2	2	3	4			13	Good
2009	Value	10.3*	3.50^	22.00	29.50	4.00				
	Score	2	1	2	3	4			12	Good
2008	Value	10.3*	4.00^	18.50	17.50	4.00				
	Score	2	1	1	3	4			11	Fair
2007	Value	10.3*	20.50^	17.00	20.00	1.00				
	Score	2	2	1	3	2			10	Fair
2006	Value	10.3	7.00	17.00	18.00	1.00	0.358	30.1		
	Score	2	1	1	3	2			9	Fair
2005	Value	10.6*	15.50^	21.00	20.00	0.00				
	Score	2	1	2	3	0			8	Fair
2004	Value	10.6*	51.00^	19.50	25.50	2.00				
	Score	2	3	1	3	3			12	Good
2003	Value	10.6	0.00	61.30	40.00	0.00	0.377	31.4		
	Score	2	0	4	4	0			10	Fair
2002	Value	10.7	0.80	67.20	45.60	0.80	0.334	28.4		
	Score	2	1	4	4	1			12	Good
2001	Value	9.0	0.80	133.60	9.60	0.00	0.349	29.5		
	Score	1	1	4	2	0			8	Fair
2000	Value	10.4	55.00	226.40	8.80	0.80	0.550	42.3		
	Score	2	3	4	2	1			12	Good

* Age data not collected
^Calculations based on age data gathered in previous years
-Instantaneous and annual mortality not calculated in years where age and growth data are not collected

Table 83. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Boltz Lake in September 2012: numbers in parentheses are standard errors.

	Inch class																		
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE
Largemouth bass	35	64	22	6	14	30	14	14	15	8	5	7	6	2	1		3	246	164.00 (13.54)

Dataset = cfdwrbol.d12

Table 84. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Boltz Lake on 11 September 2012. Standard errors are in parentheses.

Species	Area	Length group						Total	
		8.0–11.9 in		12.0–14.9 in		≥15.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Total	70	84 (1)	20	90 (2)	12	97 (2)	102	87 (1)

Dataset = cfdwrbol.d12

Table 85. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at Boltz Lake.

Year class	No. of fish	Age 0 Mean length	Age 0 Std. error	Age 0 CPUE	Age 0 Std. error	Age 0 ≥5.0 in CPUE	Age 0 ≥5.0 in Std. error	Age 1 CPUE	Age 1 Std. error
1997	145	4.2	(0.04)	96.70	(11.30)	6.70	(1.70)	25.90	(4.40)
1998	147	5.0	(0.05)	98.00	(12.00)	48.00	(5.80)	77.70	(31.00)
1999	170	5.2	(0.07)	113.30	(16.20)	68.70	(13.00)	55.00	(24.70)
2000	19	3.0	(0.27)	12.70	(6.70)	1.30	(1.30)	0.80	(0.80)
2001	46	3.2	(0.09)	30.70	(6.90)	0.70	(0.70)	0.80	(0.80)
2002	50	3.7	(0.10)	28.60	(7.40)	1.70	(1.20)	0.00	(0.00)
2003*	27	3.7	(0.15)	18.00	(4.50)	1.30	(0.80)	7.00	(2.20)
2004*	80	4.1	(0.07)	53.30	(7.10)	6.70	(2.70)	15.00	(3.40)
2005*	34	3.9	(0.11)	22.70	(5.00)	1.30	(0.80)	4.00	(1.10)
2006	90	4.6	(0.06)	60.00	(7.50)	18.70	(3.70)	20.50	(3.60)
2007	17	4.2	(0.21)	11.30	(2.60)	2.00	(0.90)	4.00	(3.58)
2008	108	3.6	(0.07)	72.00	(11.91)	5.33	(1.69)	3.50	(1.59)
2009	51	4.6	(0.13)	34.00	(8.87)	13.33	(1.98)	16.73	(3.58)
2010	54	4.9	(0.11)	36.00	(5.84)	18.00	(5.24)	8.56	(2.73)
2011	91	4.7	(0.08)	60.67	(6.73)	23.33	(4.18)	3.50	(1.18)
2012	127	4.4	(0.07)	84.67	(12.19)	18.67	(5.63)		

*Only includes wild largemouth bass CPUE for age-1 year class, stocked largemouth bass were marked by fin clip and removed from dataset.

Table 86. Species composition, relative abundance, and CPUE (fish/hr) of bluegill collected in 1.25 hour of 7.5-minute electrofishing runs in Boltz Lake, May 2012; numbers in parentheses are standard errors.

Species	Inch class							Total	CPUE
	1	2	3	4	5	6	7		
Bluegill	3	76	129	240	133	121	27	730	584.00 (62.21)

Dataset = cfdpsbol.d12

Table 87. PSD and RSD_8 values calculated for bluegill collected during 1.25 hours of electrofishing at Boltz Lake during May 2012. Fish were collected in 7.5-minute runs.

Species	No. ≥3.0 in	PSD	RSD_8
Bluegill	651	23 (± 3)	0 (± 0)

Dataset = cfdpsbol.d12

Table 88. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from Boltz Lake from 1992-2012; numbers in parentheses are standard errors.

Year	Length group				Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	
1991	0.50 (0.50)	60.80 (8.50)	10.80 (2.10)		72.40 (9.60)
1993	15.20 (7.40)	57.20 (15.80)	10.00 (5.20)		82.80 (24.00)
1994	26.00 (7.30)	131.60 (17.60)	30.50 (5.10)	0.50 (0.50)	188.40 (25.60)
1995	50.00 (9.80)	232.50 (31.70)	57.60 (12.80)	1.50 (0.70)	347.60 (46.00)
1997	91.50 (16.90)	43.00 (7.50)	39.20 (7.00)	5.40 (2.00)	179.20 (19.90)
1998	886.90 (210.80)	94.60 (13.80)	53.10 (7.70)	13.10 (2.30)	1047.70 (216.90)
1999	144.60 (30.70)	140.00 (51.50)	35.40 (6.90)	6.90 (3.10)	326.20 (62.30)
2000	1799.20 (73.50)	393.80 (19.40)	10.80 (3.20)	0.80 (0.80)	2204.60 (63.80)
2001	167.80 (51.50)	257.70 (40.00)	11.50 (3.80)	0.80 (0.80)	437.70 (60.00)
2002	174.60 (26.80)	396.20 (45.60)	16.90 (3.60)		587.70 (62.40)
2003	156.90 (49.40)	373.10 (26.30)	51.50 (16.50)		581.50 (47.70)
2004	313.30 (29.90)	261.10 (27.20)	31.80 (12.00)		606.20 (58.80)
2005	131.50 (16.00)	205.40 (34.30)	15.40 (5.40)		352.30 (35.80)
2006	229.00 (42.00)	367.00 (41.60)	39.00 (12.00)		635.00 (63.50)
2007	208.80 (29.90)	135.20 (23.10)	30.40 (8.20)		374.40 (44.30)
2008	202.40 (28.50)	263.20 (33.72)	41.60 (5.82)		507.20 (54.21)
2009	5.60 (1.71)	165.60 (29.36)	44.80 (12.58)		216.00 (34.48)
2010	73.60 (18.70)	84.80 (15.37)	100.80 (23.56)		259.20 (32.16)
2011	331.20 (46.25)	237.60 (34.03)	164.00 (42.37)		732.80 (78.36)
2012	63.20 (21.78)	401.60 (54.49)	119.20 (21.08)		584.00 (62.21)

Dataset = cfdpsbol.d12

Table 89. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from Boltz Lake in 2012.

		Age				
Year	No.	1	2	3	4	5
2011	8	2.9				
2010	24	2.9	4.5			
2009	6	3.4	5.1	6.1		
2008	9	3.2	5.2	6.3	7.0	
2007	8	3.1	4.8	5.9	6.4	6.8
Mean	55	3.1	4.8	6.1	6.7	6.8
Smallest		2.0	3.6	5.3	5.8	6.0
Largest		4.1	5.8	7.0	7.4	7.2
Std Error		0.1	0.1	0.1	0.1	0.1
95% ConLo		2.9	4.6	5.9	6.5	6.5
95% ConHi		3.2	4.9	6.3	6.9	7.0

Intercept value = 0.00
Dataset = cfdagbvr.d12

Table 90. Age frequency and CPUE (fish/hr) per inch class of bluegill collected during 1.25 hours of electrofishing at Boltz Lake during May 2012. Fish were collected in 7.5-minute runs.

	Inch class										Std
Age	1	2	3	4	5	6	7	Total	%	CPUE	err
1	3	76	29					108	15	86.13	26.46
2			100	240	89			429	59	343.20	47.99
3					44	24	3	71	10	57.15	6.45
4						37	16	53	7	42.24	8.11
5						16	8	69	9	55.28	9.44
Total	3	76	129	240	133	122	27	730	100	584.00	62.21
%	0	10	18	33	18	17	4	100			

Dataset = cfdagbol.d12 and cfdpsbol.d12

Table 91. Population assessment for bluegill collected during spring electrofishing at Boltz Lake from 2000-2012 (scoring based on statewide assessments).

Year		Mean length age-2 at capture	Years to 6.0 in	CPUE ≥6.0 in	CPUE ≥8.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2012	Value	4.5	2-2+	119.20	0.00	-	-		
	Score	3	4	4	0			11	Good
2011	Value	4.7	2-2+	164.00	0.00	0.522	40.7		
	Score	3	4	4	0			11	Good
2010	Value	4.5	2-2+	100.80	0.00	*	*		
	Score	3	4	4	0			11	Good
2009	Value	4.2	3-3+	44.80	0.00	0.904	59.5		
	Score	2	3	2	0			7	Fair
2008	Value	4.0	3-3+	41.60	0.00	1.095	66.6		
	Score	2	3	2	0			7	Fair
2007	Value	4.8	2-2+	30.40	0.00	NA	NA		
	Score	3	4	2	0			9	Fair
2006	Value	4.7	3-3+	39.00	0.00	0.830	56.4		
	Score	3	3	2	0			8	Fair
2005	Value	4.3	4-4+	16.00	0.00	1.097	66.6		
	Score	2	2	1	0			5	Poor
2004	Value	4.1	4-4+	18.34	0.00	1.012	63.7		
	Score	2	2	1	0			5	Poor
2003	Value	4.1	3-3+	53.60	0.00	0.379	31.5		
	Score	2	3	3	0			8	Fair
2002	Value	3.5	3-3+	11.28	0.00	1.640	80.6		
	Score	2	3	1	0			6	Poor
2001	Value	3.8	3-3+	12.80	0.80	1.794	83.4		
	Score	2	3	1	1			7	Fair
2000	Value	4.8	2-2+	10.91	0.73	1.593	79.7		
	Score	3	4	1	1			9	Fair

Table 92. Number of fish and the relative weight (Wr) for each length group of bluegill collected at Boltz Lake on 11 September 2012. Standard errors are in parentheses.

Species	Length group								Total	
	No.	Wr	No.	Wr	No.	Wr	No.	Wr	No.	Wr
	3.0–5.9 in		6.0–7.9 in		≥8.0 in					
Bluegill	77	86 (2)	12	73 (4)	0				102	84 (2)

Dataset = cfdwrbol.d12

Table 93. Length composition, relative abundance, and CPUE (fish/set-night) of channel catfish at Boltz Lake. Channel catfish were collected using baited, tandem hoop nets (72 hours soak time) that were set on 24 September 2012. Nets were pulled three days after setting them, and 3 sets of tandem nets were used for the sampling event.

	Inch class												Total	Average per set
Species	10	11	12	13	14	15	16	17	18	19	20	21		
Channel catfish	1	1	1		1	1	1					1	7	2.33 (1.20)

Dataset = cfdhnbol.d12

Table 94. PSD and RSD_{24} values obtained for channel catfish from tandem hoop net samples in Boltz Lake in 2012; confidence intervals are in parentheses.

Species	No. ≥stock size	PSD	RSD_{24}
Channel catfish	6	33 (± 33)	0 (± 0)

Dataset = cfdhnbol.d12

Table 95. Number of fish and the relative weight (Wr) for each length group of channel catfish collected at Boltz Lake in October 2012. Standard errors are in parentheses.

Species	Area	Length group						Total	
		11.0–15.9 in		16.0–23.9 in		≥24.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Channel catfish	Total	4	90 (3)	2	94 (6)	0		6	91 (3)

Dataset = cfdhnbol.d12

Table 96. CPUE (fish/set-night) for each length group of channel catfish collected by hoop net from Boltz Lake from 2007-2012; numbers in parentheses are standard errors.

Year	Length group			Total
	≥12.0 in	≥15.0 in	≥20.0 in	
2007	31.20 (3.28)	6.40 (1.03)	0.80 (0.37)	76.80 (12.73)
2008	9.60 (3.14)	1.60 (0.81)	0.20 (0.20)	27.40 (7.22)
2009	29.80 (14.00)	4.00 (1.55)	0.20 (0.20)	57.80 (27.66)
2010	15.60 (3.75)	3.60 (1.25)	0.40 (0.40)	32.60 (8.97)
2011		Not Sampled		
2012	1.67 (0.88)	1.00 (1.00)	0.33 (0.33)	2.33 (1.20)

Dataset = bbrhnbzl.d10 - d07; cfdhnbol.d12

Table 97. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 2.0 hours of 15-minute nocturnal electrofishing runs in Bullock Pen Lake, April 2012; numbers in parentheses are standard errors.

	Inch class																					
Location/Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Largemouth bass	1	3	8	7	3	29	58	34	35	34	32	30	24	21	33	33	18	16	3	3	425	212.50 (9.39)

Dataset = cfdpsbpl.d12

Table 98. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Bullock Pen Lake from 1991-2012; numbers in parentheses are standard errors.

	Length group					
Year	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	Total
1991		36.60	22.80	16.40	1.71 (0.69)	75.20
1994	10.00 (2.30)	17.50 (2.80)	37.60 (3.60)	40.00 (9.90)	2.50 (1.05)	104.00 (12.40)
1995	7.00 (1.60)	36.40 (4.70)	33.20 (4.40)	40.80 (5.60)		117.60 (9.90)
1996	10.50 (2.50)	26.50 (4.60)	26.00 (6.00)	30.50 (6.10)		93.60 (11.60)
1997	18.00 (3.50)	71.60 (8.70)	34.40 (3.30)	34.40 (6.10)	2.00 (0.89)	158.40 (17.30)
1998	18.00 (4.40)	43.60 (4.80)	39.60 (9.20)	33.20 (7.20)	3.50 (1.59)	139.20 (19.20)
1999	14.00 (3.60)	40.40 (4.00)	35.20 (4.00)	38.40 (12.00)	0.50 (0.50)	128.00 (14.00)
2000	14.50 (4.80)	35.50 (5.00)	21.00 (3.10)	42.40 (9.80)	0.50 (0.50)	113.50 (6.50)
2001	9.00 (3.20)	33.50 (4.30)	38.50 (7.20)	66.00 (15.20)	2.50 (1.05)	147.20 (16.40)
2002	6.50 (1.70)	29.50 (3.00)	41.50 (7.20)	54.50 (10.40)	1.50 (0.73)	132.00 (16.50)
2003	9.00 (2.50)	19.50 (2.30)	32.50 (4.10)	56.50 (8.80)	0.50 (0.50)	117.50 (9.80)
2004	6.50 (1.30)	31.50 (3.70)	45.00 (8.50)	57.50 (11.40)	2.50 (1.50)	140.50 (13.40)
2005	9.50 (1.30)	17.00 (2.60)	38.00 (5.80)	63.00 (13.70)	3.50 (1.40	127.50 (15.50)
2006	13.50 (4.30)	35.50 (6.00)	25.50 (3.90)	62.50 (8.40)	1.00 (0.65)	137.00 (8.70)
2007	17.50 (3.50)	44.50 (6.70)	32.00 (2.80)	44.00 (8.10)	0.50 (0.50)	138.00 (6.10)
2008	9.50 (2.92)	47.50 (5.78)	75.00 (5.74)	62.50 (9.32)	1.50 (1.05)	194.50 (11.68)
2009	5.50 (1.99)	45.50 (7.44)	42.50 (5.01)	54.00 (5.35)	7.50 (1.18)	147.50 (13.82)
2010	33.00 (7.05)	26.75 (3.74)	28.25 (3.36)	44.25 (6.21)	1.75 (0.63)	132.25 (13.90)
2011	22.00 (4.28)	39.00 (5.39)	31.00 (3.27)	43.00 (6.36)	0.50 (0.50)	135.00 (11.18)
2012	25.50 (2.38)	80.50 (7.87)	43.00 (4.12)	63.50 (10.04)	3.00 (1.25)	212.50 (9.39)

Dataset = cfdpsbpl.d12 – .d91

Table 99. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Bullock Pen Lake in 2012; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD_{15}
Largemouth bass	374	57 (± 5)	34 (± 5)

Dataset = cfdpsbpl.d12

Table 100. Population assessment for largemouth bass collected during spring electrofishing at Bullock Pen Lake from 2000-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2012	Value	10.5*	9.50	43.00	63.50	3.00				
	Score	2	1	3	4	3			13	Good
2011	Value	10.5	5.07	31.00	43.00	0.50	0.422	34.4		
	Score	2	1	2	4	1			10	Fair
2010	Value	10.2*	6.40^	28.25	44.25	1.75				
	Score	2	1	2	4	2			11	Fair
2009	Value	10.2*	0.80^	42.50	54.00	7.50				
	Score	2	1	3	4	4			14	Good
2008	Value	10.2*	2.10^	75.00	62.50	1.50				
	Score	2	1	4	4	2			13	Good
2007	Value	10.2*	3.40^	32.00	44.00	0.50				
	Score	2	1	2	4	1			10	Fair
2006	Value	10.2	2.50	25.50	62.50	1.00	0.238	21.2		
	Score	2	1	2	4	2			11	Fair
2005	Value	10.7*	1.30^	38.00	63.00	3.50				
	Score	2	1	3	4	3			13	Good
2004	Value	10.7*	0.00^	45.00	57.50	2.50				
	Score	2	0	3	4	3			12	Good
2003	Value	10.7	1.80	32.50	56.50	0.50	0.323	27.6		
	Score	2	1	2	4	1			10	Fair
2002	Value	10.9	0.50	41.50	54.50	1.50	0.375	31.2		
	Score	3	1	3	4	2			13	Good
2001	Value	10.0	0.00	38.50	66.00	2.50	0.174	16.0		
	Score	1	0	3	4	3			11	Fair
2000	Value	9.3	6.80	21.00	42.40	0.50	0.186	17.0		
	Score	1	1	2	4	1			9	Fair

* Age data not collected
^Calculations based on age data gathered in previous years
-Instantaneous and annual mortality not calculated in years where age and growth data are not collected

Table 101. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Bullock Pen Lake in September 2012: numbers in parentheses are standard errors.

	Inch class																					
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Largemouth bass	2	13	17	2	10	27	23	22	22	23	17	10	13	8	10	17	11	9	7	1	264	176.00 (19.24)

Dataset = cfdwrblp.d12

Table 102. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Bullock Pen Lake on 18 September 2012. Standard errors are in parentheses.

Species	Area	Length group						Total	
		8.0–11.9 in		12.0–14.9 in		≥15.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Total	90	88 (1)	40	91 (1)	63	101 (1)	193	93 (1)

Dataset = cfdwrblp.d12

Table 103. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at Bullock Pen Lake.

Year class	Area	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
1997	Total	3.6	(0.1)	34.00	(11.90)	0.70	(0.70)	3.00	(1.70)
1998	Total	3.5	(0.1)	28.00	(8.40)	1.30	(1.30)	4.00	(0.90)
1999	Total	3.7	(0.1)	30.00	(6.10)	2.00	(1.40)	6.80	(2.60)
2000	Total	3.8	(0.3)	6.30	(1.50)	0.00		0.00	
2001	Total	3.6	(0.2)	12.00	(2.70)	1.30	(0.80)	0.50	(0.50)
2002	Total	3.1	(0.1)	17.30	(4.60)	0.00		1.80	(0.70)
2003	Total	3.3	(0.1)	22.00	(8.10)	0.00		0.00	
2004	Total	4.1	(0.2)	16.00	(3.70)	4.00	(1.50)	*	
2005	Total	3.5	(0.1)	28.00	(8.10)	2.00	(0.90)	2.50	(1.30)
2006	Total	4.2	(0.2)	4.00	(1.50)	0.00		3.40	(1.10)
2007	Total	4.1	(0.2)	6.70	(2.00)	0.70	(0.70)	2.10	(1.13)
2008	Total	4.1	(0.2)	20.67	(5.60)	5.33	(1.69)	0.80	(0.52)
2009	Total	4.5	(0.4)	8.67	(2.40)	4.67	(1.91)	3.70	(1.41)
2010	Total	4.8	(0.1)	42.67	(8.04)	20.00	(3.72)	5.07	(1.55)
2011	Total	3.8	(0.1)	38.00	(4.23)	5.33	(1.98)	9.50	(1.05)
2012	Total	4.0	(0.1)	22.67	(5.23)	1.33	(0.84)		

*Largemouth bass were stocked, and were not able to be distinguished from the wild age-1 largemouth bass

Table 104. Length composition, relative abundance, and CPUE (fish/set-night) of channel catfish at Bullock Pen Lake. Channel catfish were collected using baited, tandem hoop nets (72 hours soak time) that were set on 27 September 2012. Nets were pulled three days after setting them, and 3 sets of tandem nets were used for the sampling event.

	Inch class											
Species	8	9	10	11	12	13	14	15	16	17	Total	Average per set
Channel catfish	12	21	30	17	7	3	1	1	1	2	95	31.67 (11.68)

Dataset = cfdhnbpl.d12

Table 105. PSD and RSD_{24} values obtained for channel catfish from tandem hoop net samples in Bullock Pen Lake in 2012; confidence intervals are in parentheses.

Species	No. ≥stock size	PSD	RSD_{24}
Channel catfish	32	9 (± 9)	0 (± 0)

Dataset = cfdhnbpl.d12

Table 106. Number of fish and the relative weight (Wr) for each length group of channel catfish collected at Bullock Pen Lake in October 2012. Standard errors are in parentheses.

		Length group							
Species	Area	11.0–15.9 in		16.0–23.9 in		≥24.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Channel catfish	Total	29	93 (2)	3	106 (12)	0		32	95 (2)

Dataset = cfdhnbpl.d12

Table 107. CPUE (fish/set-night) for each length group of channel catfish collected by hoop net from Bullock Pen Lake from 2007-2012; numbers in parentheses are standard errors.

	Length group			
Year	≥12.0 in	≥15.0 in	≥20.0 in	Total
2007	44.00 (24.61)	6.20 (4.27)	1.00 (0.55)	170.80 (102.69)
2008	10.80 (3.23)	2.80 (1.07)	0.40 (0.40)	43.00 (11.01)
2009	25.00 (12.13)	6.00 (2.93)	0.60 (0.40)	64.60 (39.94)
2010	36.20 (5.56)	15.20 (2.08)	1.20 (0.97)	69.00 (20.43)
2011		Not Sampled		
2012	5.00 (1.53)	1.33 (0.33)	0.00	31.67 (11.68)

Dataset = bbrhnbpl.d10 - d07; cfdhnbpl.d12

Table 108. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 2.0 hours of 15-minute nocturnal electrofishing runs in Corinth Lake, April 2012; numbers in parentheses are standard errors.

	Inch class																					
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE
Largemouth bass	9	7	25	15	9	125	132	51	42	44	19	11	8	6	3	6	7	9	7	1	536	268.00 (21.22)

Dataset = cfdpscor.d12

Table 109. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Corinth Lake from 1992-2012; numbers in parentheses are standard errors.

	Length group					
Year	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	Total
1992	31.00 (9.30)	22.50 (5.30)	5.00 (2.60)	0.00 (0.00)	0.00 (0.00)	58.50 (9.80)
1993	34.00 (8.20)	111.30 (11.50)	7.30 (2.40)	2.00 (1.40)	0.00 (0.00)	154.70 (13.50)
1996	53.50 (10.10)	174.50 (16.70)	14.50 (2.00)	4.50 (1.60)	0.00 (0.00)	247.00 (18.10)
1998	15.50 (3.20)	111.50 (9.80)	19.00 (3.00)	4.00 (1.70)	0.50 (0.50)	150.00 (14.40)
1999	137.00 (14.20)	56.50 (5.20)	24.50 (4.30)	3.50 (1.20)	1.00 (0.65)	221.50 (16.40)
2000	312.80 (47.00)	136.00 (18.20)	22.40 (6.50)	4.80 (2.30)	1.60 (0.98)	476.00 (63.70)
2001	127.20 (16.60)	231.20 (8.00)	20.80 (5.10)	9.60 (3.20)	0.00 (0.00)	388.80 (13.50)
2002	40.70 (8.10)	153.30 (21.70)	13.30 (2.90)	16.70 (2.80)	1.33 (1.33)	224.00 (28.70)
2003	58.00 (13.60)	146.00 (16.40)	23.30 (3.80)	6.00 (2.00)	0.67 (0.67)	233.30 (28.20)
2004	23.00 (4.80)	77.50 (5.00)	40.00 (4.30)	5.00 (1.50)	1.00 (1.00)	145.50 (8.00)
2005	45.50 (3.90)	115.00 (9.30)	72.00 (10.00)	20.50 (3.00)	2.50 (1.30)	253.00 (16.00)
2006	15.00 (2.70)	74.50 (6.80)	29.00 (1.30)	34.50 (4.70)	1.50 (0.73)	153.00 (8.80)
2007	88.50 (14.80)	106.00 (7.00)	21.50 (3.40)	22.50 (3.50)	5.50 (2.38)	238.50 (17.60)
2008	52.00 (9.74)	199.00 (16.97)	69.50 (4.84)	37.50 (3.85)	7.50 (1.92)	358.00 (25.15)
2009	30.00 (8.04)	82.50 (11.24)	17.50 (4.47)	27.50 (4.37)	6.00 (2.14)	157.50 (23.41)
2010	77.50 (7.01)	60.00 (8.28)	8.50 (1.59)	21.00 (4.94)	4.00 (1.31)	167.00 (13.64)
2011	90.00 (9.83)	177.00 (11.15)	37.00 (5.22)	33.00 (3.91)	8.50 (2.06)	337.00 (19.33)
2012	32.50 (6.07)	175.00 (15.25)	37.00 (4.88)	23.50 (4.03)	8.50 (2.32)	268.00 (21.22)

Dataset = cfdpscor.d12 – .d92

Table 110. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Corinth Lake in 2012; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD_{15}
Largemouth bass	471	26 (± 4)	10 (± 3)

Dataset = cfdpscor.d12

Table 111. Population assessment for largemouth bass collected during spring electrofishing at Corinth Lake from 2000-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2012	Value	11.1*	24.50	37.00	23.50	8.50				
	Score	3	2	3	3	4			15	Good
2011	Value	11.1	90.20	37.00	33.00	8.50	0.515	40.2		
	Score	3	4	3	4	4			18	Excellent
2010	Value	11.1*	46.17^	8.50	21.00	4.00				
	Score	3	3	1	3	4			14	Good
2009	Value	11.1*	21.80^	17.50	27.50	6.00				
	Score	3	2	1	3	4			13	Good
2008	Value	11.1*	47.70^	69.50	37.50	7.50				
	Score	3	3	4	4	4			18	Excellent
2007	Value	11.1	86.70	21.50	22.50	5.50	0.498	39.3		
	Score	3	4	2	3	4			16	Good
2006	Value	10.1*	11.11^	29.00	34.50	1.50				
	Score	2	1	2	4	2			11	Fair
2005	Value	10.1*	32.44^	72.00	20.50	2.50				
	Score	2	2	4	3	3			14	Good
2004	Value	10.1*	21.06^	40.00	5.00	1.00				
	Score	2	2	3	2	2			11	Fair
2003	Value	10.1*	54.30^	23.33	6.00	0.67				
	Score	2	3	2	2	1			10	Fair
2002	Value	10.1	35.30	13.33	16.67	1.33	0.688	49.7		
	Score	2	2	1	2	2			9	Fair
2001	Value	8.7	63.40	20.80	9.60	0.00	0.805	55.3		
	Score	1	3	2	2	0			8	Fair
2000	Value	9.1	293.20	22.40	4.80	1.60	0.566	43.2		
	Score	1	4	2	2	2			11	Fair

* Age data not collected
^Calculations based on age data gathered in previous years
-Instantaneous and annual mortality not calculated in years where age and growth data are not collected

Table 112. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Corinth Lake on 12 September 2012: numbers in parentheses are standard errors.

	Inch class																			
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE
Largemouth bass	35	87	58	16	31	37	31	22	8	6	4	3	2	4	1		2	2	349	232.67 (26.44)

Dataset = cfdwrcor.d12

Table 113. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Corinth Lake on 12 September 2012. Standard errors are in parentheses.

Species	Area	Length group							
		8.0–11.9 in		12.0–14.9 in		≥15.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Total	79	81 (1)	13	85 (1)	11	97 (2)	103	83 (1)

Dataset = cfdwrcor.d12

Table 114. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at Corinth Lake.

Year class	Area	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
1999	Total	4.3	0.1	74.00	12.30	8.00	2.90	293.20	46.00
2000	Total	4.3	0.1	35.30	7.40	3.30	1.90	63.40	10.90
2001	Total	4.6	0.1	112.70	15.60	32.00	6.80	35.30	7.40
2002	Total	4.6	0.1	163.30	13.70	42.00	4.50	54.30	13.40
2003	Total	4.1	0.1	73.70	9.20	4.60	1.80	21.06	5.10
2004	Total	4.0	0.1	74.00	6.20	2.70	1.30	32.44	4.20
2005	Total	4.4	0.1	41.30	2.70	4.70	1.20	11.11	2.70
2006	Total	4.9	0.1	176.50	15.20	78.00	9.940	86.67	14.30
2007	Total	5.1	0.04	152.70	31.20	89.30	28.80	47.67	9.06
2008	Total	5.1	0.1	112.67	14.95	66.00	12.89	21.83	5.36
2009	Total	4.5	0.1	17.33	2.46	2.00	1.37	39.67	3.30
2010	Total	5.9	0.04	140.00	9.91	134.00	8.18	90.20	9.79
2011	Total	4.3	0.06	116.67	21.99	22.00	3.69	24.50	4.92
2012	Total	5.0	0.06	52.89	5.04	26.22	3.02		

Table 115. Species composition, relative abundance, and CPUE (fish/hr) of bluegill and redear sunfish collected in 1.25 hours of 7.5-minute electrofishing runs in Corinth Lake, May 2012; numbers in parentheses are standard errors.

Species	Inch class								Total	CPUE
	2	3	4	5	6	7	8	9		
Bluegill	3	55	174	71	64	7			374	299.20 (27.67)
Redear sunfish				6	20	28	29	1	84	67.20 (14.22)

Dataset = cfdpscor.d12

Table 116. PSD and RSD values calculated for sunfish collected during 3.50 hours of electrofishing at Corinth Lake during May 2012. Fish were collected in 7.5-minute runs.

Species	No. ≥stock size	PSD	RSD[a]
Bluegill	371	19 (± 4)	0 (± 0)
Redear sunfish	84	69 (± 10)	1 (± 1)

[a]Bluegill = RSD_8; Redear = RSD_9
Dataset = cfdpscor.d12

Table 117. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from Corinth Lake from 1992-2012; numbers in parentheses are standard errors.

	Length group				
Year	<3.0 in	3.0–5.9 in	6.0-7.9 in	≥8.0 in	Total
1992	3.00 (1.70)	36.00 (24.90)	49.00 (8.50)	10.00 (5.50)	98.00 (30.40)
1993	2.70 (1.30)	42.00 (13.10)	54.00 (10.90)	20.70 (5.20)	119.30 (26.20)
1996	6.00 (3.90)	75.00 (12.00)	54.50 (14.50)	1.50 (0.70)	137.00 (25.90)
1998	2.00 (1.10)	80.00 (19.40)	50.50 (10.30)	3.00 (1.00)	135.50 (23.70)
1999	42.00 (17.10)	113.00 (16.50)	32.50 (7.20)	17.00 (5.80)	204.50 (26.60)
2000	8.80 (2.50)	270.40 (20.10)	100.80 (12.00)	20.80 (3.60)	400.80 (25.90)
2001	7.20 (4.00)	185.60 (18.00)	140.00 (14.80)	5.60 (2.10)	338.40 (23.50)
2002	2.40 (1.20)	140.00 (16.70)	56.80 (12.10)	0.00	199.20 (26.60)
2003	14.20 (6.20)	164.40 (14.10)	91.60 (10.70)	0.90 (0.90)	271.10 (23.30)
2004	17.60 (4.90)	174.40 (15.90)	61.60 (10.90)	0.00	253.60 (22.70)
2005	12.00 (4.20)	262.40 (32.70)	82.40 (22.20)	0.00	356.80 (47.80)
2006	40.40 (6.00)	211.20 (17.90)	32.80 (6.40)	0.00	284.40 (14.70)
2007	13.20 (2.60)	148.80 (12.10)	98.00 (10.20)	0.00	260.00 (17.90)
2008	4.80 (1.22)	180.40 (13.65)	105.20 (12.41)	0.40 (0.40)	290.80 (18.82)
2009	9.20 (4.03)	151.60 (15.26)	166.80 (19.43)	0.00	327.60 (30.64)
2010	9.43 (2.57)	126.57 (11.13)	55.14 (6.85)	0.00	191.14 (15.54)
2011	32.00 (6.89)	222.80 (16.36)	60.00 (10.49)	0.00	314.80 (27.01)
2012	2.40 (1.22)	240.00 (24.56)	56.80 (6.13)	0.00	299.20 (27.67)

Dataset = cfdpscor.d12

Table 118. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from Corinth Lake in 2012.

		Age						
Year	No.	1	2	3	4	5	6	7
2011	8	3.1						
2010	22	2.7	4.7					
2009	9	2.4	4.6	6.1				
2008	7	2.9	4.7	6.0	6.8			
2007	1	3.3	5.1	6.0	6.7	7.1		
2006	1	2.4	4.0	5.5	6.3	7.0	7.4	
2005	2	2.3	4.5	5.5	6.1	6.4	6.7	7.0
Mean	50	2.7	4.6	6.0	6.7	6.7	6.9	7.0
Smallest		1.7	3.6	5.2	6.0	6.4	6.7	6.9
Largest		4.3	5.9	6.7	7.2	7.1	7.4	7.0
Std Error		0.1	0.1	0.1	0.1	0.2	0.2	0.0
95% ConLo		2.5	4.4	5.8	6.4	6.4	6.5	6.9
95% ConHi		2.9	4.8	6.2	6.9	7.1	7.4	7.0

Intercept value = 0.00
Dataset = cfdagcor.d12

Table 119. Age frequency and CPUE (fish/hr) per inch class of bluegill collected during 1.25 hours of electrofishing at Corinth Lake during May 2012. Fish were collected in 7.5-minute runs.

	Inch class									Std
Age	2	3	4	5	6	7	Total	%	CPUE	err
1	3	24					27	7	21.96	2.74
2		31	174	58			263	70	210.12	21.67
3				13	41		54	14	42.91	4.61
4					17	4	21	6	17.16	1.89
5						1	1	0	0.80	0.24
6						1	1	0	0.80	0.24
7					6	1	7	2	5.45	0.59
Total	3	55	174	71	64	7	374	100	299.20	27.67
%	1	15	47	19	17	2	100			

Dataset = cfdagcor.d12 and cfdpscor.d12

Table 120. Population assessment for bluegill collected during spring electrofishing at Corinth Lake from 2000-2012 (scoring based on statewide assessment).

Year		Mean length age-2 at capture	Years to 6.0 in	CPUE ≥6.0 in	CPUE ≥8.0 in	Total score	Assessment rating
2012	Value	4.7	3-3+	56.80	0.00		
	Score	3	3	3	0	9	Fair
2011	Value	4.4	3-3+	60.00	0.00		
	Score	2	3	3	0	8	Fair
2010	Value	4.0	3-3+	55.14	0.00		
	Score	2	3	3	0	8	Fair
2009	Value	4.8	3-3+	166.80	0.00		
	Score	3	3	4	0	10	Fair
2008	Value	4.3	3-3+	105.60	0.40		
	Score	2	3	4	1	10	Fair
2007	Value	4.6	3-3+	98.00	0.00		
	Score	3	3	4	0	10	Fair
2006	Value	4.1	3-3+	32.80	0.00		
	Score	2	3	2	0	7	Fair
2005	Value	4.0	3-3+	82.40	0.00		
	Score	2	3	4	0	9	Fair
2004	Value	4.1	2-2+	61.60	0.00		
	Score	2	4	3	0	9	Fair
2003	Value	4.3	2-2+	92.44	0.89		
	Score	2	4	4	1	11	Good
2002	Value	4.2	2-2+	56.80	0.00		
	Score	2	4	3	0	9	Fair
2001	Value	4.3	2-2+	145.60	5.60		
	Score	2	4	4	2	12	Good
2000	Value	5.3	2-2+	121.60	20.80		
	Score	4	4	4	4	16	Excellent

Table 121. Electrofishing CPUE (fish/hr) for each length group of redear sunfish collected from Corinth Lake from 1992-2012; numbers in parentheses are standard errors.

	Length group					
Year	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	≥10.0 in	Total
1992	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
1993	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	2.00 (2.00)	1.30 (1.30)	2.00 (2.00)
1996	0.50 (0.50)	7.00 (2.80)	5.50 (2.70)	10.50 (3.50)	4.00 (1.70)	23.50 (3.90)
1998	0.00 (0.00)	4.00 (0.80)	0.50 (0.50)	19.00 (4.30)	15.50 (3.30)	23.50 (4.00
1999	0.00 (0.00)	3.70 (1.60)	2.70 (1.10)	5.30 (1.50)	3.20 (1.10)	21.50 (3.50)
2000	0.00 (0.00)	14.40 (4.10)	33.60 (15.80)	52.80 (6.60)	16.80 (4.20)	100.80 (21.90)
2001	1.60 (1.10)	20.80 (5.00)	54.40 (9.20)	72.80 (10.00)	44.00 8.70)	149.60 (15.60)
2002	0.00 (0.00)	4.00 (1.80)	6.40 (2.00)	82.40 (15.40)	52.00 (8.70)	92.80 (15.90)
2003	0.90 (0.90)	11.60 (3.60)	11.60 (2.40)	28.40 (5.20)	24.90 (5.60)	52.40 (6.10)
2004	0.80 (0.80)	13.60 (1.70)	17.60 (5.20)	19.20 (5.20)	14.40 (3.30)	51.20 (6.80)
2005	0.00 (0.00)	38.40 (4.40)	28.80 (6.40)	31.20 (11.10)	3.20 (1.80)	98.40 (17.30)
2006	0.00 (0.00)	19.60 (3.90)	54.00 (6.60)	7.60 (1.50)	0.40 (0.40)	81.20 (7.20)
2007	0.00 (0.00)	5.20 (1.30)	37.60 (7.10)	21.20 (5.50)	0.00 (0.00)	64.00 (11.70)
2008	0.00 (0.00)	10.40 (2.18)	33.60 (4.48)	27.60 (5.01)	0.00 (0.00)	71.60 (7.90)
2009	0.00 (0.00)	2.40 (1.02)	65.20 (7.60)	38.00 (7.47)	0.40 (0.40)	105.60 (14.10)
2010	0.86 (0.48)	7.14 (1.45)	18.86 (2.97)	12.00 (2.49)	0.00 (0.00)	38.86 (4.97)
2011	1.60 (0.73)	26.00 (4.49)	36.80 (3.04)	20.00 (3.04)	0.00 (0.00)	84.40 (7.99)
2012	0.00	4.80 (2.13)	38.40 (8.42)	24.00 (5.06)	0.00 (0.00)	67.20 (14.22)

Dataset = cfdpscor.d12

Table 122. Mean back calculated lengths (in.) at each annulus for otoliths from redear sunfish collected from Corinth Lake in 2012.

		Age					
Year	No.	1	2	3	4	5	6
2010	14	3.4	6.0				
2009	15	3.5	6.3	7.8			
2008	5	3.8	6.5	7.9	8.7		
2006	1	2.9	6.2	7.4	7.9	8.5	9.2
Mean	35	3.5	6.2	7.8	8.6	8.5	9.2
Smallest		2.3	5.3	6.8	7.9	8.5	9.2
Largest		4.6	7.1	8.6	8.9	8.5	9.2
Std Error		0.1	0.1	0.1	0.1		
95% ConLo		3.3	6.1	7.6	8.3		
95% ConHi		3.6	6.4	8.0	8.8		

Intercept value = 0.00
Dataset = cfdagcor.d12

Table 123. Age frequency and CPUE (fish/hr) per inch class of redear sunfish collected during 1.25 hours of electrofishing at Corinth Lake during May 2012. Fish were collected in 7.5-minute runs.

	Inch class								Std
Age	5	6	7	8	9	Total	%	CPUE	err
2	6	18				24	28	18.80	4.98
3		3	28	16		46	55	37.05	7.92
4				13		13	16	10.55	2.26
5						0	0	0.00	0.00
6					1	1	1	0.80	0.80
Total	6	20	28	29	1	84	100	67.20	14.22
%	7	24	33	35	1	100			

Dataset = cfdagcor.d12 and cfdpscor.d12

Table 124. Population assessment for redear sunfish collected during spring electrofishing at Corinth Lake from 2002-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Years to 8.0 in	CPUE ≥8.0 in	CPUE ≥10.0 in	Total score	Assessment rating
2012	Value	7.8	3-3+	24.00	0.00		
	Score	4	4	4	0	12	Good
2011	Value	7.8	3-3+	20.00	0.00		
	Score	4	4	4	0	12	Good
2010	Value	7.1	3-3+	12.00	0.00		
	Score	4	4	3	0	11	Good
2009	Value	7.7	3-3+	38.00	0.40		
	Score	4	4	4	1	13	Good
2008	Value	8.0	3-3+	27.60	0.00		
	Score	4	4	4	0	12	Good
2007	Value	7.6	3-3+	21.20	0.00		
	Score	4	4	4	0	12	Good
2006	Value	7.3	3-3+*	7.60	0.40		
	Score	4	4	2	1	11	Good
2005	Value	7.6	3-3+	31.20	3.20		
	Score	4	4	4	2	14	Excellent
2004	Value	9.1*	2-2+*	19.20	14.40		
	Score	4	4	4	4	16	Excellent
2003	Value	9.1*	2-2+*	28.44	24.89		
	Score	4	4	4	4	16	Excellent
2002	Value	9.1	2-2+	82.40	52.00		
	Score	4	4	4	4	16	Excellent

* Age data not collected

Table 125. Number of fish and the relative weight (Wr) for each length group of bluegill and redear sunfish collected at Corinth Lake on 12 September 2012. Standard errors are in parentheses.

Species	Length group								Total	
	No.	Wr	No.	Wr	No.	Wr	No.	Wr	No.	Wr
	3.0–5.9 in		6.0–7.9 in		≥8.0 in				Total	
Bluegill	78	105 (3)	31	87 (2)					109	100 (2)
	1.0–3.9 in		4.0–6.9 in		7.0–9.0 in		≥9.0 in		Total	
Redear sunfish			27	99 (5)	39	93 (1)	6	86 (6)	72	95 (2)

Dataset = cfdwrcor.d12

Table 126. Length composition, relative abundance, and CPUE (fish/set-night) of channel catfish at Corinth Lake. Channel catfish were collected using baited, tandem hoop nets (72 hours soak time) that were set on 1 October 2012. Nets were pulled three days after setting them, and 3 sets of tandem nets were used for the sampling event.

	Inch class												Total	Average per set
Species	9	10	11	12	13	14	15	16	17	18	19	20		
Channel catfish	5	67	98	37	28	14	16	11	7	7	2	1	293	97.67 (38.13)

Dataset = cfdhncor.d12

Table 127. PSD and RSD_{24} values obtained for channel catfish from tandem hoop net samples in Corinth Lake in 2012; confidence intervals are in parentheses.

Species	No. ≥stock size	PSD	RSD_{24}
Channel catfish	221	13 (± 4)	0 (± 0)

Dataset = cfdhncor.d12

Table 128. Number of fish and the relative weight (Wr) for each length group of channel catfish collected at Corinth Lake in October 2012. Standard errors are in parentheses.

		Length group							
Species	Area	11.0–15.9 in		16.0–23.9 in		≥24.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Channel catfish	Total	161	90 (1)	28	87 (1)	0		196	89 (1)

Dataset = cfdhncor.d12

Table 129. CPUE (fish/set-night) for each length group of channel catfish collected by hoop net from Corinth Lake from 2010-2012; numbers in parentheses are standard errors.

	Length group			
Year	≥12.0 in	≥15.0 in	≥20.0 in	Total
2010	21.00 (8.96)	1.67 (0.33)	0.00	92.67 (46.78)
2011	25.00 (12.90	5.67 (4.18)	0.33 (0.33)	85.67 (59.37)
2012	41.00 (13.58)	14.67 (4.10)	0.33 (0.33)	97.67 (38.13)

Dataset = cfdhncor.d12 - .d10

Table 130. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected in 2.0 hours of 15-minute electrofishing runs in Elmer Davis Lake, April 2012; numbers in parentheses are standard errors.

	Inch class																			
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE
Largemouth bass	28	49	66	13	11	87	78	114	116	92	47	32	19	11	2	6	8	9	788	394.00 (12.42)

Dataset = cfdpselm.d12

Table 131. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Elmer Davis Lake from 1996-2012; numbers in parentheses are standard errors.

	Length group					
Year	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	Total
1996	102.00 (15.30)	163.50 (19.50)	37.00 (6.20)	9.50 (3.40)	4.50 (1.40	312.00 (32.70)
1997	113.50 (20.10)	252.00 (27.20)	39.00 (5.60)	19.00 (3.70)	5.50 (1.84)	423.50 (43.90)
1998	52.50 (9.50)	93.30 (6.80)	16.80 (2.30)	7.50 (1.70)	3.20 (1.05)	170.10 (15.10)
1999	253.50 (32.92)	47.00 (8.34)	36.00 (6.93)	17.50 (5.45)	2.50 (1.05)	354.00 (45.36)
2000	134.50 (14.70)	136.50 (11.00)	31.50 (6.00)	29.00 (4.40)	2.00 (1.31)	331.50 (21.30)
2001	121.00 (17.00)	220.00 (21.20)	18.50 (2.40)	21.00 (4.10)	0.50 (0.50)	380.50 (24.90)
2002	99.00 (16.30)	124.00 (12.30)	4.00 (1.30)	10.00 (2.70)	0.50 (0.50)	237.00 (26.20)
2003	96.00 (10.20)	189.50 (16.50)	14.50 (3.90)	15.00 (2.70)	3.50 (1.59)	315.00 (25.10)
2004	107.50 (10.00)	123.50 (10.00)	22.00 (3.50)	15.00 (1.70)	3.50 (1.59)	268.00 (17.40)
2005	93.00 (10.60)	197.00 (11.20)	60.00 (10.40)	15.00 (2.40)	3.50 (1.18)	365.00 (27.20)
2006	74.50 (11.50)	123.50 (12.20)	40.50 (7.90)	6.50 (1.80)	1.00 (0.65)	245.00 (15.40)
2007	32.50 (5.80)	137.00 (16.40)	41.50 (10.30)	8.00 (2.80)	1.00 (0.65)	219.00 (28.90)
2008	149.00 (17.85)	188.00 (20.72)	45.00 (5.64)	14.50 (4.00)	2.00 (1.31)	396.50 (35.19)
2009	36.00 (6.00)	192.50 (18.98)	76.00 (9.04)	28.00 (3.78)	6.50 (2.26)	332.50 (30.20)
2010	41.00 (5.00)	147.50 (17.85)	71.50 (12.27)	24.00 (5.01)	3.00 (1.25)	284.00 (33.52)
2011	51.00 (6.22)	152.50 (20.44)	69.50 (8.10)	23.00 (4.46)	3.50 (1.18)	296.00 (30.91)
2012	83.50 (8.83)	197.50 (10.87)	85.50 (7.33)	27.50 (3.66)	4.50 (1.18)	394.00 (12.42)

Dataset = cfdpselm.d12 – .d96

Table 132. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Elmer Davis Lake in 2012; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD_{15}
Largemouth bass	621	36 (± 4)	9 (± 2)

Dataset = cfdpselm.d12

Table 133. Mean back calculated lengths (in.) at each annulus for otoliths from largemouth bass collected from Elmer Davis Lake in 2012.

		Age										
Year	No.	1	2	3	4	5	6	7	8	9	10	11
2011	38	5.0										
2010	25	5.8	8.6									
2009	20	5.5	8.9	10.5								
2008	7	6.1	9.2	11.2	12.3							
2007	16	6.2	9.4	11.2	12.3	13.2						
2006	6	5.9	9.5	11.4	12.5	13.3	14.0					
2005	8	6.7	10.3	12.1	13.2	14.3	15.1	15.8				
2004	5	5.7	9.0	10.6	12.4	13.2	14.2	14.9	15.4			
2002	2	7.8	10.7	12.7	14.0	15.3	16.3	17.4	18.2	18.6	19.3	
2001	3	6.2	10.2	11.8	13.5	14.8	15.8	16.5	17.2	17.8	18.3	18.8
Mean	130	5.7	9.2	11.1	12.7	13.7	14.8	15.9	16.5	18.1	18.7	18.8
Smallest		3.2	7.2	8.6	10.0	11.7	12.2	12.9	13.7	16.2	16.7	17.2
Largest		8.1	12.3	13.9	15.3	16.6	17.8	18.5	19.1	19.8	20.2	20.6
Std Error		0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.6	0.6	0.6	1.0
95% ConLo		5.5	9.0	10.9	12.3	13.3	14.2	15.0	15.3	16.9	17.5	16.8
95% ConHi		5.9	9.4	11.4	13.0	14.1	15.5	16.7	17.7	19.4	19.9	20.7

Intercept value = 0.00
Dataset = cfdagelm.d12

Table 134. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 2.00 hours of electrofishing at Elmer Davis Lake during April 2012. Fish were collected in 15-minute runs.

	Inch class																				Std
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	%	CPUE	err
1	28	49	66	13															156	20	78.00	8.91
2					11	80	55	10											156	20	77.86	5.59
3						7	23	104	70										204	26	101.94	7.85
4									23	33	7								63	8	31.68	2.51
5									23	42	20	16	5						106	13	52.96	3.92
6										8	7	10	5						29	4	14.71	1.17
7										8		6	5	7		4			31	4	15.42	1.98
8											13		5	4	1				23	3	11.42	1.49
9																			0	0	0.00	0.00
10																	8		8	1	4.00	1.51
11															1	2		9	12	2	6.00	1.20
Total	28	49	66	13	11	87	78	114	116	92	47	32	19	11	2	6	8	9	788	100	394.00	12.42
%	4	6	8	2	1	11	10	14	15	12	6	4	2	1	0	1	1	1	100			

Dataset = cfdagelm.d12 and cfdpselm.d12

Table 135. Population assessment for largemouth bass collected during spring electrofishing at Elmer Davis Lake from 2000-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2012	Value	10.5	78.00	85.50	27.50	4.50	0.392	32.5		
	Score	2	4	4	3	4			17	Excellent
2011	Value	9.8*	32.43	69.50	23.00	3.50				
	Score	1	2	4	3	3			13	Good
2010	Value	9.8*	29.00^	71.50	24.00	3.00				
	Score	1	2	4	3	3			13	Good
2009	Value	9.8*	18.50^	76.00	28.00	6.50				
	Score	1	2	4	3	4			14	Good
2008	Value	9.8	127.50	45.00	14.50	2.00	0.489	38.6		
	Score	1	4	3	2	3			13	Good
2007	Value	10.5*	26.90^	41.50	8.00	1.00				
	Score	2	2	3	2	2			11	Fair
2006	Value	10.5*	68.10^	40.50	6.50	1.00				
	Score	2	3	3	2	2			12	Good
2005	Value	10.5*	78.10^	60.00	15.00	3.50				
	Score	2	4	4	2	3			15	Good
2004	Value	10.5	94.40	22.00	15.00	3.50	0.481	38.2		
	Score	2	4	2	2	3			13	Good
2003	Value	10.3*	57.50^	14.50	15.00	3.50				
	Score	2	3	1	2	3			11	Fair
2002	Value	10.3*	80.60^	4.00	10.00	0.50				
	Score	2	4	1	2	1			10	Fair
2001	Value	10.3	52.80	18.50	21.00	0.50	0.516	40..3		
	Score	2	3	1	3	1			10	Fair
2000	Value	10.7	73.80	31.50	29.00	2.00	0.618	46.1		
	Score	2	3	2	3	3			13	Good

* Age data not collected
^Calculations based on age data gathered in previous years
-Instantaneous and annual mortality not calculated in years where age and growth data are not collected

Table 136. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Elmer Davis Lake in September 2012: numbers in parentheses are standard errors.

	Inch class																						
Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Largemouth bass	2	34	26	13	7	5	26	26	37	56	53	26	25	7	1	2	1	0	1	3	1	352	234.67 (21.56)

Dataset = cfdwrelm.d12

Table 137. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Elmer Davis Lake on 11 September 2012. Standard errors are in parentheses.

Species	Area	Length group						Total	
		8.0–11.9 in		12.0–14.9 in		≥15.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Total	149	84 (1)	57	83 (1)	9	97 (3)	215	84 (1)

Dataset = cfdwrelm.d12

Table 138. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at Elmer Davis Lake.

Year class	Area	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2000	Total	3.8	(0.1)	269.60	(33.20)	14.40	(2.00)	52.80	(9.70)
2001	Total	4.5	(0.1)	210.70	(25.00)	47.30	(3.00)	80.60	(13.30)
2002	Total	4.3	(0.1)	67.30	(10.00)	13.30	(3.20)	57.50	(7.90)
2003	Total	4.2	(0.1)	179.00	(32.00)	27.00	(10.00)	94.40	(9.90)
2004	Total	4.3	(0.03)	180.00	(38.50)	24.70	(4.30)	78.10	(9.90)
2005	Total	4.4	(0.04)	190.00	(29.60)	33.30	(5.30)	68.10	(10.20)
2006	Total	3.7	(0.04)	166.00	(17.40)	8.00	(2.50)	26.90	(6.10)
2007	Total	4.3	(0.05)	114.00	(24.60)	17.30	(5.40)	127.50	(16.40)
2008	Total	3.9	(0.1)	73.33	(9.61)	0.67	(0.67)	18.50	(3.70)
2009	Total	4.2	(0.1)	108.00	(14.24)	20.00	(4.95)	29.00	(5.33)
2010	Total	4.7	(0.1)	108.00	(14.12)	34.67	(3.21)	32.43	(3.86)
2011	Total	4.0	(0.1)	74.00	(13.81)	14.67	(3.21)	78.00	(8.91)
2012	Total	3.4	(0.1)	56.00	(7.45)	6.00	(1.71)		

Table 139. Species composition, relative abundance, and CPUE (fish/hr) of bluegill and redear sunfish collected in 1.25 hours of 7.5-minute electrofishing runs in Elmer Davis Lake, May 2012; numbers in parentheses are standard errors.

Species	Inch class											Total	CPUE
	1	2	3	4	5	6	7	8	9	10	11		
Bluegill	15	38	125	122	71	54	32	1				458	366.40 (57.92)
Redear sunfish	2	5	2	5	32	47	8	17	16	5	1	140	112.00 (11.62)

Dataset = cfdpselm.d12

Table 140. PSD and RSD values calculated for sunfish collected during 1.25 hours of electrofishing at Elmer Davis Lake during May 2012. Fish were collected in 7.5-minute runs.

Species	No. ≥stock size	PSD	RSD[a]
Bluegill	405	21 (± 4)	0.2 (± 0.2)
Redear sunfish	131	36 (± 8)	17 (± 6)

[a]Bluegill = RSD_8; Redear = RSD_9
Dataset = cfdpselm.d12

Table 141. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from Elmer Davis Lake from 1994-2012; numbers in parentheses are standard errors.

	Length group				
Year	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	Total
1994	1.00 (0.70)	12.00 (3.00)	29.00 (5.70)	1.50 (1.10)	43.50 (6.00)
1995			NS		
1996	42.00 (7.90)	75.00 (9.70)	55.00 (11.20)	20.00 (5.40)	192.00 (22.50)
1997	0.50 (0.50)	79.50 (12.50)	59.00 (16.30)	5.50 (2.10)	144.50 (28.60)
1998	2.70 (1.10)	17.10 (4.50)	7.70 (1.60)	2.90 (1.10)	30.40 (5.80)
1999	579.50 (74.50)	502.00 (65.40)	23.00 (7.60)	5.00 (3.40)	1,109.50 (130.90)
2000			NS		
2001	1.50 (0.80)	109.50 (28.00)	157.00 (23.50)	0.50 (0.50)	268.50 (49.60)
2002	33.60 (11.80)	78.40 (19.30)	272.80 (55.30)	0.80 (0.80)	385.60 (78.20)
2003	17.60 (4.70)	89.60 (12.90)	151.20 (30.10)	2.40 (1.70)	260.80 (37.10)
2004	40.00 (8.70)	100.80 (13.70)	119.20 (29.80)	8.80 (3.90)	268.80 (44.70)
2005	38.40 (11.40)	92.80 (16.10)	59.20 (9.80)	8.80 (3.00)	199.20 (23.90)
2006	162.40 (35.90)	115.20 (20.10)	42.40 (8.50)	16.00 (4.50)	336.00 (43.80)
2007	7.60 (1.80)	81.20 (7.40)	42.80 (9.70)	9.20 (2.40)	140.80 (14.90)
2008	34.40 (5.66)	133.20 (24.68)	58.80 (9.31)	6.80 (2.34)	233.20 (32.99)
2009	8.80 (1.81)	58.13 (6.52)	33.87 (3.71)	1.07 (0.50)	101.87 (7.30)
2010	51.60 (12.75)	126.80 (16.16)	26.80 (4.07)	0.00 (0.00)	205.20 (23.39)
2011	112.40 (19.56)	226.00 (18.87)	50.00 (7.25)	5.60 (2.54)	394.00 (36.20)
2012	42.40 (7.26)	254.40 (39.55)	68.80 (15.00)	0.80 (0.80)	366.40 (57.92)

Dataset = cfdpselm.d12

Table 142. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from Elmer Davis Lake in 2012.

		Age					
Year	No.	1	2	3	4	5	6
2011	2	2.7					
2010	27	2.8	4.2				
2009	13	2.6	4.6	5.8			
2008	9	3.1	5.0	6.4	7.0		
2007	4	2.9	4.9	6.4	7.2	7.4	
2006	1	3.2	4.9	6.4	7.0	7.7	8.1
Mean	56	2.8	4.5	6.1	7.0	7.5	8.1
Smallest		1.7	2.7	4.9	6.3	7.1	8.1
Largest		4.1	5.7	7.0	7.6	7.7	8.1
Std Error		0.1	0.1	0.1	0.1	0.1	
95% ConLo		2.7	4.3	5.9	6.8	7.2	
95% ConHi		2.9	4.7	6.3	7.2	7.7	

Intercept value = 0.00
Dataset = cfdagelm.d12

Table 143. Age frequency and CPUE (fish/hr) per inch class of bluegill collected during 1.25 hours of electrofishing at Elmer Davis Lake during May 2012. Fish were collected in 7.5-minute runs.

	Inch class										Std
Age	2	3	4	5	6	7	8	Total	%	CPUE	err
1	19							19	4	15.20	2.05
2	19	125	112	32				288	65	230.48	35.66
3			10	39	27	4		79	18	63.56	12.18
4					27	14		41	9	32.98	7.16
5						14		14	3	11.38	3.17
6							1	1	0	0.80	0.80
Total	38	125	122	71	54	32	1	443	100	366.40	57.92
	9	28	28	16	12	7	0	100			

Dataset = cfdagelm.d12 and cfdpselm.d12

Table 144. Population assessment for bluegill collected during spring electrofishing at Elmer Davis Lake from 2001-2012 (scoring based on statewide assessments).

Year		Mean length age-2 at capture	Years to 6.0 in	CPUE ≥6.0 in	CPUE ≥8.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2012	Value	4.2	2-2+	69.60	0.80	1.305	72.9		
	Score	2	4	3	1			10	Fair
2011	Value	4.4	2-2+	55.60	5.60	*	*		
	Score	2	4	3	2			11	Good
2010	Value	4.3	2-2+	26.80	0.00	1.471	77.0		
	Score	2	4	2	0			8	Fair
2009	Value	4.4	2-2+	34.93	1.07	*	*		
	Score	2	4	2	1			9	Fair
2008	Value	4.1	2-2+	65.60	6.80	0.748	52.7		
	Score	2	4	3	2			11	Good
2007	Value	4.1	2-2+	52.00	9.20	0.718	51.2		
	Score	2	4	3	2			11	Good
2006	Value	5.1	2-2+	58.40	16.00	0.464	37.1		
	Score	4	4	3	4			15	Excellent
2005	Value	4.2	2-2+	68.00	8.80	0.729	51.7		
	Score	2	4	3	2			11	Good
2004	Value	4.3	2-2+	128.00	8.80	*	*		
	Score	2	4	4	2			12	Good
2003	Value	4.5	2-2+	153.60	2.40	*	*		
	Score	3	4	4	1			12	Good
2002	Value	4.5	2-2+	273.60	0.80	*	*		
	Score	3	4	4	1			12	Good
2001	Value	4.2	2-2+	157.50	0.50	*	*		
	Score	2	4	4	1			11	Good

Table 145. Electrofishing CPUE (fish/hr) for each length group of redear sunfish collected from Elmer Davis Lake from 1994-2012; numbers in parentheses are standard errors.

	Length group					
Year	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	≥10.0 in	Total
1994	0.00	0.50 (0.50)	0.50 (0.50)	2.50 (2.00)	1.50 (1.50)	3.50 (1.90)
1995			NS			
1996		7.50 (1.60)	23.50 (3.30)	4.00 (1.10)	1.00 (0.70)	35.00 (4.60)
1997	0.00	1.00 (1.00)	0.50 (0.50)	13.00 (3.80)	0.50 (0.50)	14.50 (4.60)
1998	0.00	0.30 (0.30)	0.00	0.00	0.00	0.30 (0.30)
1999	0.00	19.00 (4.40)	13.00 (2.20)	20.50 (5.30)	0.00	52.50 (7.50)
2000			NS			
2001	0.00	3.50 (2.10)	21.00 (5.10)	3.50 (1.60)	1.00 (0.70)	28.00 (4.80)
2002	0.80 (0.80)	4.00 (1.80)	8.80 (4.70)	15.20 (4.20)	0.80 (0.80)	28.80 (6.10)
2003	1.60 (1.10)	7.20 (5.50)	31.20 (7.40)	19.20 (6.20)	0.80 (0.80)	59.20 (13.50)
2004	4.00 (2.70)	8.00 (3.40)	66.40 (18.40)	24.80 (9.70)	3.20 (2.40)	103.20 (29.10)
2005	0.00	11.20 (2.40)	54.40 (16.70)	63.20 (18.60)	4.80 (1.80)	128.80 (26.90)
2006	0.00	12.80 (4.00)	4.80 (1.80)	30.40 (6.50)	4.00 (1.30)	51.20 (10.00)
2007	0.40 (0.40)	1.60 (0.70)	18.00 (3.50)	15.60 (3.40)	2.00 (1.10)	35.60 (5.60)
2008	1.20 (0.66)	13.20 (2.74)	40.80 (9.16)	17.60 (5.27)	2.80 (1.45)	72.80 (14.68)
2009	0.80 (0.59)	5.60 (1.28)	18.67 (3.24)	6.40 (1.82)	1.87 (0.74)	31.47 (4.29)
2010	1.20 (0.88)	3.20 (1.35)	23.60 (2.69)	13.20 (2.92)	0.80 (0.55)	41.20 (4.72)
2011	4.80 (1.68)	22.40 (4.52)	6.80 (1.95)	58.00 (8.49)	2.40 (1.31)	92.00 (10.34)
2012	5.60 (2.68)	31.20 (5.26)	44.00 (9.26)	31.20 (7.20)	4.80 (1.31)	112.00 (11.62)

Dataset = cfdpselm.d12

Table 146. Mean back calculated lengths (in.) at each annulus for otoliths from redear sunfish collected from Elmer Davis Lake in 2012.

		Age				
Year	No.	1	2	3	4	5
2011	5	2.7				
2010	23	3.4	5.6			
2009	16	3.7	6.2	7.7		
2008	5	3.8	6.9	8.6	9.7	
2007	3	3.7	6.2	8.1	9.5	9.9
Mean	52	3.5	6.0	7.9	9.6	9.9
Smallest		1.3	2.7	5.7	8.9	9.8
Largest		5.3	7.5	9.3	10.4	10.1
Std Error		0.1	0.2	0.2	0.2	0.1
95% ConLo		3.3	5.6	7.5	9.2	9.8
95% ConHi		3.7	6.3	8.3	10.0	10.1

Intercept value = 0.00
Dataset = cfdagelm.d12

Table 147. Age frequency and CPUE (fish/hr) per inch class of redear sunfish collected during 1.25 hours of electrofishing at Elmer Davis Lake during May 2012. Fish were collected in 7.5-minute runs.

	Inch class														Std
Age	1	2	3	4	5	6	7	8	9	10	11	Total	%	CPUE	Err
1	2	4	1									5	4	4.07	2.25
2		1	1	5	27	30	5					70	51	55.67	8.36
3					5	17	3	15	3			43	31	34.11	4.84
4								2	6	3		12	8	9.30	2.26
5									6	2	1	8	6	6.45	1.90
Total	2	5	2	5	32	47	8	17	16	5	1	140	100	112.00	11.62
%	1	4	1	4	23	34	6	12	11	4	1	100			

Dataset = cfdagelm.d12 and cfdpselm.d12

Table 148. Population assessment for redear sunfish collected during spring electrofishing at Elmer Davis Lake from 2001-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Years to 8.0 in	CPUE ≥8.0 in	CPUE ≥10.0 in	Total score	Assessment rating
2012	Value	7.7	3-3+	31.20	4.80		
	Score	4	4	4	3	15	Excellent
2011	Value	8.7	2-2+	58.00	2.40		
	Score	4	4	4	2	14	Excellent
2010	Value	8.4	2-2+	13.20	1.20		
	Score	4	4	3	1	12	Good
2009	Value	8.0	3-3+	6.40	1.90		
	Score	4	4	2	2	12	Good
2008	Value	8.8	2-2+	17.60	2.80		
	Score	4	4	4	3	15	Excellent
2007	Value	8.6	2-2+	15.60	2.00		
	Score	4	4	4	2	14	Excellent
2006	Value	8.8	2-2+	30.40	4.00		
	Score	4	4	4	3	15	Excellent
2005	Value	8.7	2-2+	63.20	4.80		
	Score	4	4	4	3	15	Excellent
2004	Value	9.0*	2-2+*	24.80	3.20		
	Score	4	4	4	2	14	Excellent
2003	Value	9.0	2-2+	19.20	0.80		
	Score	4	4	4	1	13	Good
2002	Value	6.5*	4-4+*	15.20	0.80		
	Score	4	3	4	1	12	Good
2001	Value	6.5	4-4+	3.50	1.00		
	Score	4	3	1	1	9	Fair

* Age data not collected

Table 149. Number of fish and the relative weight (Wr) for each length group of bluegill and redear sunfish collected at Elmer Davis Lake on 11 September 2012. Standard errors are in parentheses.

Species	Length group								Total	
	No.	Wr	No.	Wr	No.	Wr	No.	Wr	No.	Wr
	3.0–5.9 in		6.0–7.9 in		≥8.0 in				Total	
Bluegill	102	108 (2)	45	97 (1)	0				147	105 (2)
	1.0–3.9 in		4.0–6.9 in		7.0–9.0 in		≥9.0 in		Total	
Redear sunfish	12	120 (9)	32	102 (3)	20	101 (1)	7	101 (3)	71	105 (2)

Dataset = cfdwrelm.d12

Table 150. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected in 2.0 hours of 15-minute electrofishing runs in Kincaid Lake, April 2012; numbers in parentheses are standard errors.

	Inch class																					
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE
Spotted bass											1										1	0.50 (0.50)
Largemouth bass	3	2	3	1	15	25	23	33	23	23	27	32	20	21	26	23	19	12	2	3	336	168.00 (11.08)

Dataset = cfdpskin.d12

Table 151. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Kincaid Lake from 1992-2012; numbers in parentheses are standard errors.

	Length group					
Year	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	Total
1992	4.00 (0.00)	34.00 (3.10)	13.30 (1.80)	53.30 (4.10)	11.33 (1.76)	104.70 (3.50)
1995	27.50 (3.40)	38.50 (4.50)	17.50 (2.90)	65.00 (6.50)	13.50 (3.02)	148.50 (11.90)
1997	13.50 (2.90)	59.00 (6.20)	53.00 (4.20)	92.00 (14.30)	16.00 (3.70)	217.50 (18.00)
1999	15.00 (4.30)	60.00 (8.60)	55.00 (3.70)	94.00 (6.80)	16.50 (3.42)	224.00 (8.60)
2000	15.30 (5.70)	64.50 (7.00)	36.50 (5.50)	70.00 (7.80)	6.50 (1.05)	186.00 (16.30)
2001	16.00 (2.90)	99.30 (13.70)	35.30 (5.80)	102.70 (10.60)	8.00 (1.03)	253.30 (23.50)
2002	10.00 (4.50)	35.30 (9.40)	36.70 (8.40)	110.00 (14.80)	6.67 (1.98)	192.00 (29.20)
2003	23.40 (5.80)	70.30 (12.10)	32.60 (4.00)	94.90 (15.80)	7.43 (2.03)	221.10 (22.80)
2004	7.00 (2.90)	76.00 (12.50)	38.50 (5.00)	71.00 (10.00)	9.50 (1.50)	192.50 (16.50)
2005	22.00 (3.70)	56.00 (8.20)	69.50 (9.30)	113.00 (18.50)	15.00 (2.80)	260.50 (30.70)
2006	14.50 (3.50)	82.00 (8.30)	43.00 (5.00)	112.50 (9.80)	16.50 (4.17)	252.00 (14.90)
2007	21.50 (5.30)	50.50 (6.10)	47.50 (5.30)	96.00 (6.70)	15.50 (2.44)	215.50 (13.60)
2008	16.00 (3.38)	92.50 (11.50)	48.00 (6.37)	112.00 (15.21)	12.00 (3.63)	268.50 (31.87)
2009	15.50 (2.44)	72.50 (13.72)	70.00 (9.59)	107.00 (10.97)	13.50 (1.50)	265.00 (24.36)
2010	14.75 (1.89)	72.00 (4.86)	61.50 (5.20)	69.25 (4.27)	7.75 (1.44)	217.50 (9.27)
2011	22.00 (3.21)	62.00 (7.89)	59.00 (8.41)	99.00 (4.88)	14.50 (2.13)	242.00 (16.89)
2012	12.00 (2.51)	52.00 (5.76)	41.00 (6.67)	63.00 (5.64)	8.50 (1.18)	168.00 (11.08)

Dataset = cfdpskin.d12 - .d92

Table 152. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Kincaid Lake in 2012; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD_{15}
Largemouth bass	312	67 (± 5)	40 (± 5)

Dataset = cfdpskin.d12

Table 153. Population assessment for largemouth bass collected during spring electrofishing at Kincaid Lake from 2000-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2012	Value	9.9*	4.50	41.00	63.00	8.50				
	Score	1	1	3	4	4			13	Good
2011	Value	9.9*	5.00	59.00	99.00	14.50				
	Score	1	1	4	4	4			14	Good
2010	Value	9.9*	1.33^	61.50	69.25	7.75				
	Score	1	1	4	4	4			14	Good
2009	Value	9.9	2.50	70.00	107.00	13.50	0.401	33.1		
	Score	1	1	4	4	4			14	Good
2008	Value	10.5*	1.00^	48.00	112.00	12.00				
	Score	2	1	3	4	4			14	Good
2007	Value	10.5*	0.00^	47.50	96.00	15.50				
	Score	2	0	3	4	4			13	Good
2006	Value	10.5*	1.50^	43.00	112.50	16.50				
	Score	2	1	3	4	4			14	Good
2005	Value	10.5	0.00	69.50	113.00	15.00	0.344	29.1		
	Score	2	0	4	4	4			14	Good
2004	Value	10.5*	1.00^	38.50	71.00	9.50				
	Score	2	1	3	4	4			14	Good
2003	Value	10.5	0.00	32.57	94.86	7.43	0.389	32.2		
	Score	2	0	2	4	4			12	Good
2002	Value	10.4	0.00	36.70	110.00	6.67	0.308	26.5		
	Score	2	0	3	4	4			13	Good
2001	Value	9.0	0.00	35.30	102.70	8.00	0.261	23.0		
	Score	1	0	3	4	4			12	Good
2000	Value	9.5	1.50	36.50	70.00	6.50	0.288	25.0		
	Score	1	1	3	4	4			13	Good

* Age data not collected
^Calculations based on age data gathered in previous years
-Instantaneous and annual mortality not calculated in years where age and growth data are not collected

Table 154. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for largemouth bass in Kincaid Lake in September 2012: numbers in parentheses are standard errors.

	Inch class																				
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE
Largemouth bass	19	38	13	1	14	39	24	14	31	28	28	25	16	7	6	6	3	1	3	316	210.67 (13.17)

Dataset = cfdwrkin.d12

Table 155. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Kincaid Lake on 13 September 2012. Standard errors are in parentheses.

Species	Area	Length group						Total	
		8.0–11.9 in		12.0–14.9 in		≥15.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Total	90	88 (1)	63	89 (2)	26	100 (1)	180	90 (1)

Dataset = cfdwrkin.d12

Table 156. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at Kincaid Lake.

Year class	No. of fish	Age 0 Mean length	Age 0 Std. error	Age 0 CPUE	Age 0 Std. error	Age 0 ≥5.0 in CPUE	Age 0 ≥5.0 in Std. error	Age 1 CPUE	Age 1 Std. error
1999	25	3.1	(0.2)	16.70	(5.70)	0.00		1.50	(1.10)
2000	11	3.1	(0.2)	4.70	(1.60)	0.00		0.00	
2001	36	2.9	(0.1)	20.60	(6.70)	0.00		0.00	
2002	76	2.6	(0.1)	43.40	(10.60)	0.00		0.00	
2003	33	2.8	(0.1)	22.00	(4.70)	0.00		1.00	(0.70)
2004	19	3.0	(0.1)	12.70	(4.30)	0.00		0.00	
2005	259	2.5	(0.03)	129.50	(19.30)	0.00		1.50	(0.70)
2006	64	2.7	(0.1)	42.70	(11.90)	0.00		0.00	
2007	29	3.2	(0.1)	19.30	(4.80)	0.70	(0.70)	1.00	(0.65)
2008	42	3.3	(0.1)	28.00	(2.07)	0.00		2.50	(1.14)
2009	47	2.7	(0.04)	31.33	(8.16)	0.00		1.33	(0.46)
2010	80	4.2	(0.1)	53.33	(11.99)	14.00	(3.39)	5.00	(1.65)
2011	112	3.8	(0.08)	74.67	(28.82)	7.33	(4.18)	4.50	(1.40)
2012	71	3.4	(0.08)	47.33	(9.09)	0.67	(0.67)		

Dataset = cfdwrkin.d12

Table 157. Length composition, relative abundance, and CPUE (fish/set-night) of channel catfish at Kincaid Lake. Channel catfish were collected using baited, tandem hoop nets (72 hours soak time) that were set on 1 October 2012. Nets were pulled three days after setting them, and 3 sets of tandem nets were used for the sampling event.

	Inch class																		Total	Average per set
Species	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26		
Channel catfish	15	22	21	20	9	6	6	2	6	1	2	1	3	3	2			1	120	40.00 (8.50)

Dataset = cfdhnkin.d12

Table 158. PSD and RSD_{24} values obtained for channel catfish from tandem hoop net samples in Kincaid Lake in 2012; confidence intervals are in parentheses.

Species	No. ≥stock size	PSD	RSD_{24}
Channel catfish	83	25 (± 9)	1 (± 1)

Dataset = cfdhnkin.d12

Table 159. Number of fish and the relative weight (Wr) for each length group of channel catfish collected at Kincaid Lake in October 2012. Standard errors are in parentheses.

Species	Area	Length group						Total	
		11.0–15.9 in		16.0–23.9 in		≥24.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Channel catfish	Total	62	89 (1)	20	98 (2)	1	106	83	91 (1)

Dataset = cfdhnkin.d12

Table 160. CPUE (fish/set-night) for each length group of channel catfish collected by hoop net from Kincaid Lake from 2009-2012; numbers in parentheses are standard errors.

Year	Length group			Total
	≥12.0 in	≥15.0 in	≥20.0 in	
2009	44.67 (19.32)	21.00 (9.02)	9.67 (4.84)	84.00 (31.19)
2010	21.00 (9.02)	9.00 (4.58)	1.00 (0.58)	131.00 (53.54)
2011	8.33 (4.33)	1.33 (0.33)	0.00	48.67 (23.33)
2012	20.67 (4.70)	9.00 (3.79)	3.33 (1.45)	40.00 (8.50)

Dataset = cfdhncor.d12 - .d09

Table 161. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected in 1.25 hours of 15-minute electrofishing runs in McNeely Lake, April 2012; numbers in parentheses are standard errors.

	Inch class																			
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE
Largemouth bass	3	8	8	3	29	73	22	21	21	17	16	6	5	11	6	0	4	1	254	203.20 (24.01)

Dataset = cfdpsmcl.d12

Table 162. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from McNeely Lake from 1996-2012; numbers in parentheses are standard errors.

	Length group					
Year	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	Total
1996	77.30 (9.20)	6.70 (2.00)	18.00 (3.40)	23.30 (2.80)	0.00 (0.00)	125.30 (11.00)
1998	80.00 (11.10)	134.70 (18.60)	7.30 (2.20)	14.00 (3.40)	0.67 (0.67)	236.00 (26.00)
1999	71.00 (10.60)	161.00 (4.40)	27.00 (7.40)	22.00 (5.30)	2.00 (1.15)	281.00 (7.50)
2000	44.70 (5.00)	144.70 (13.40)	104.70 (13.80)	20.70 (2.20)	4.00 (1.46)	314.70 (24.70)
2001	71.30 (10.10)	144.00 (6.40)	97.70 (16.40)	31.30 (3.80)	2.67 (1.33)	346.00 (28.10)
2002	28.70 (3.00)	48.00 (12.50)	43.30 (4.80)	9.30 (1.70)	0.00 (0.00)	129.30 (30.30)
2003	44.70 (8.20)	96.00 (12.40)	56.00 (10.70)	27.30 (3.20)	1.33 (0.84)	224.00 (19.70)
2004	27.30 (4.30)	58.00 (8.90)	23.30 (4.30)	28.00 (3.90)	2.67 (1.33)	136.70 (15.60)
2005	23.30 (6.30)	76.70 (5.90)	46.00 (4.90)	30.00 (6.20)	1.33 (0.84)	176.00 (8.60)
2006	56.00 (5.60)	72.70 (12.10)	37.30 (6.50)	24.00 (2.50)	1.33 (0.84)	190.00 (14.60)
2007	14.70 (1.70)	98.00 (11.90)	46.70 (13.10)	40.00 (8.90)	1.33 (1.33)	199.30 (30.80)
2008	127.30 (6.50)	124.00 (14.60)	58.70 (6.60)	20.70 (4.60)	1.33 (0.84)	330.70 (21.50)
2009	66.67 (12.29)	73.33 (10.86)	28.00 (7.66)	12.00 (3.27)	1.33 (0.84)	180.00 (17.19)
2010	49.33 (2.23)	92.67 (11.52)	14.67 (1.98)	14.00 (3.54)	1.33 (0.84)	170.67 (12.84)
2011	76.00 (14.86)	64.67 (14.47)	27.33 (4.18)	14.67 (2.67)	2.67 (1.98)	182.67 (18.81)
2012	40.80 (7.53)	109.60 (12.94)	31.20 (8.43)	21.60 (6.14)	0.80 (0.80)	203.20 (24.01)

Dataset = cfdpsmcl.d12 – d96

Table 163. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in McNeely Lake in 2012; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD_{15}
Largemouth bass	203	33 (± 6)	13 (± 5)

Dataset = cfdpsmcl.d12

Table 164. Mean back calculated lengths (in.) at each annulus for otoliths from largemouth bass collected from McNeely Lake in 2012.

		Age												
Year	No.	1	2	3	4	5	6	7	8	9	10	11	12	13
2011	13	4.7												
2010	29	6.2	8.3											
2009	14	5.5	9.3	10.5										
2008	17	5.8	8.7	10.8	11.9									
2007	14	6.3	9.5	11.0	12.2	13.3								
2006	2	5.3	10.5	12.1	13.4	14.2	14.8							
2005	6	6.7	10.0	12.1	13.4	14.5	15.4	16.1						
2002	2	6.2	10.1	12.0	13.8	15.1	16.2	16.9	17.6	18.4	18.9			
1999	1	6.2	9.9	11.7	12.8	14.3	15.6	16.2	16.8	17.4	18.0	18.6	19.2	19.7
Mean	98	5.9	9.0	11.0	12.4	13.9	15.4	16.3	17.3	18.1	18.8	18.6	19.2	19.7
Smallest		3.2	6.7	8.8	10.5	11.8	13.5	14.2	16.7	17.3	17.6	18.6	19.2	19.7
Largest		8.1	11.0	13.2	14.8	16.1	17.1	17.8	18.5	19.5	20.2	18.6	19.2	19.7
Std Error		0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.6	0.7	0.8			
95% ConLo		5.7	8.8	10.8	12.1	13.5	14.8	15.6	16.2	16.7	17.0			
95% ConHi		6.1	9.2	11.2	12.7	14.3	16.0	16.9	18.5	19.5	20.2			

Intercept value = 0.00
Dataset = cfdagmcl.d12

Table 165. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 1.25 hours of electrofishing at McNeely Lake during April 2012. Fish were collected in 15-minute runs.

	Inch class																				Std
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	%	CPUE	err
1	3	8	8																19	7	15.20	6.37
2				3	29	66	16												114	45	91.49	9.01
3						7	6	16	6										35	14	27.76	5.09
4								5	13	13	2	2							34	13	27.10	7.27
5									2	4	14	2	2						24	9	18.98	3.07
6												2	2						3	1	2.53	0.65
7												2	2	11	3				17	7	13.73	3.61
8																					0.00	0.00
9																					0.00	0.00
10															3			1	4	2	3.20	1.02
11																					0.00	0.00
12																					0.00	0.00
13																	4		4	2	3.20	1.50
Total	3	8	8	3	29	73	22	21	21	17	16	6	5	11	6		4	1	254	100	203.20	24.01
%	1	3	3	1	11	29	9	8	8	7	6	2	2	4	2		2	0	100			

Dataset = cfdagmcl.d12 and cfdpsmcl.d12

Table 166. Population assessment for largemouth bass collected during spring electrofishing at McNeely Lake from 2000-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2012	Value	10.5	15.20	31.20	21.60	0.80	0.356	30.0		
	Score	2	1	2	3	1			9	Fair
2011	Value	11.4*	71.96	27.33	14.67	2.67				
	Score	3	3	2	2	3			13	Good
2010	Value	11.4*	50.84^	14.67	14.00	1.33				
	Score	3	3	1	2	2			11	Fair
2009	Value	11.4*	67.83^	28.00	12.00	1.33				
	Score	3	3	2	2	2			12	Good
2008	Value	11.4	130.00	58.67	20.67	1.33	0.527	40.9		
	Score	3	4	4	3	2			16	Good
2007	Value	11.0*	5.33^	46.67	40.00	1.33				
	Score	3	1	3	4	2			13	Good
2006	Value	11.0*	50.67^	37.33	24.00	1.33				
	Score	3	3	3	3	2			14	Good
2005	Value	11.0*	12.67^	46.00	30.00	1.33				
	Score	3	1	3	4	2			13	Good
2004	Value	11.0	24.67	23.33	28.00	2.67	0.319	27.3		
	Score	3	2	2	3	3			13	Good
2003	Value	9.8*	20.00^	56.00	27.33	1.33				
	Score	1	2	4	3	2			12	Good
2002	Value	9.8*	23.33^	43.33	9.33	0.00				
	Score	1	2	3	2	0			8	Fair
2001	Value	9.8	70.00	99.33	31.33	2.67	0.392	32.4		
	Score	1	3	4	4	3			15	Good
2000	Value	10.4*	40.67^	104.67	20.67	4.00				
	Score	2	2	4	3	4			15	Good

* Age data not collected
^Calculations based on age data gathered in previous years
-Instantaneous and annual mortality not calculated in years where age and growth data are not collected

Table 167. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.50 hours of 15-minute electrofishing runs for black bass in McNeely Lake in September 2012: numbers in parentheses are standard errors.

	Inch class																			
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE
Largemouth bass	1	20	156	152	34	5	37	75	46	21	4	6	3			2	4	1	567	378.00 (15.28)

Dataset = cfdwrmcl.d12

Table 168 Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at McNeely Lake on 14 September 2012. Standard errors are in parentheses.

Species	Area	Length group						Total	
		8.0–11.9 in		12.0–14.9 in		≥15.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Total	98	86 (1)	13	90 (2)	7	94 (5)	118	87 (1)

Dataset = cfdwrmcl.d12

Table 169. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at McNeely Lake.

Year class	Area	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2000	Total	3.8	(0.1)	87.30	(16.10)	10.00	(2.30)	70.00	(9.40)
2001	Total	4.1	(0.9)	20.70	(1.60)	2.00	(1.40)	23.30	(2.40)
2002	Total	4.7	(0.1)	24.00	(5.80)	10.70	(3.80)	20.00	(2.50)
2003	Total	4.1	(0.1)	56.00	(14.00)	7.00	(1.90)	24.70	(3.50)
2004	Total	4.0	(0.1)	49.00	(2.40)	3.50	(0.90)	12.70	(2.40)
2005	Total	4.7	(0.1)	193.30	(17.20)	88.00	(12.10)	50.70	(7.20)
2006	Total	4.5	(0.1)	108.70	(23.30)	33.30	(5.70)	5.30	(1.70)
2007	Total	5.2	(0.04)	174.40	(49.00)	116.00	(28.30)	130.00	(6.66)
2008	Total	4.6	(0.1)	300.00	(34.53)	97.60	(16.62)	67.83	(11.67)
2009	Total	4.5	(0.04)	68.00	(5.66)	11.33	(1.23)	50.84	(2.15)
2010	Total	5.2	(0.04)	169.60	(15.10)	106.40	(12.17)	71.96	(14.23)
2011	Total	4.3	(0.05)	116.00	(12.84)	20.80	(6.62)	15.20	(6.37)
2012	Total	5.0	(0.04)	242.00	(9.95)	124.00	(11.03)		

Table 170. Species composition, relative abundance, and CPUE (fish/hr) of bluegill and redear sunfish collected in 1.00 hours of 7.5-minute electrofishing runs in McNeely Lake, May 2012; numbers in parentheses are standard errors.

Species	Inch class									Total	CPUE
	1	2	3	4	5	6	7	8	9		
Bluegill	2	2	22	105	198	153	50	1		533	533.00 (61.80)
Redear sunfish			1	3	17	37	25	25	9	117	117.00 (13.17)

Dataset = cfdpsmcl.d12

Table 171. PSD and RSD values calculated for sunfish collected during 1.25 hours of electrofishing at McNeely Lake during May 2012. Fish were collected in 7.5-minute runs.

Species	No. ≥stock size	PSD	RSD[a]
Bluegill	529	39 (± 4)	0.2 (± 0.2)
Redear sunfish	116	51 (± 9)	8 (± 5)

[a]Bluegill = RSD_8; Redear = RSD_9
Dataset = cfdpsmcl.d12

Table 172. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from McNeely Lake from 1994-2012; numbers in parentheses are standard errors.

	Length group				
Year	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	Total
1994	17.60 (3.70)	303.20 (59.60)	13.60 (2.40)	0.00	334.40 (59.10)
1996	2.70 (1.30)	187.30 (52.60)	95.30 (20.50)	0.00	285.30 (68.30)
1998	0.00	72.00 (31.80)	68.70 (15.40)	0.00	140.70 (44.80)
1999	8.00 (4.30)	108.00 (20.60)	108.00 (27.70)	0.00	224.00 (44.80)
2000	2.00 (0.90)	204.70 (36.60)	110.00 (23.30)	0.00	316.70 (46.30)
2001	73.60 (23.80)	152.00 (17.00)	200.80 (29.10)	1.60 (1.10)	428.00 (35.20)
2002	53.60 (11.70)	270.40 (33.20)	335.20 (33.80)	0.80 (0.80)	660.00 (41.90)
2003	12.00 (2.20)	132.00 (31.90)	30.40 (10.60)	0.00	174.40 (40.90)
2004	4.00 (1.80)	181.60 (25.20)	74.40 (8.60)	0.00	260.00 (27.30)
2005	22.00 (3.30)	159.00 (16.70)	174.00 (27.60)	0.00	355.00 (33.50)
2006	47.00 (11.10)	145.00 (23.70)	101.00 (27.60)	0.00	293.00 (40.60)
2007	8.80 (2.80)	114.40 (18.60)	118.40 (22.50)	0.00	241.60 (30.80)
2008	98.40 (11.81)	184.00 (17.77)	206.40 (21.53)	0.00	488.80 (37.70)
2009	4.80 (3.20)	152.80 (28.43)	225.60 (20.27)	0.80 (0.80)	384.00 (37.70)
2010	7.20 (2.22)	104.00 (17.53)	96.00 (12.28)	0.00	207.20 (27.62)
2011	9.60 (3.11)	318.40 (39.42)	156.80 (26.96)	1.60 (1.60)	486.40 (43.49)
2012	4.00 (2.14)	325.00 (47.64)	203.00 (21.48)	1.00 (1.00)	533.00 (61.80)

Dataset = cfdpsmcl.d12

Table 173. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from McNeely Lake in 2012.

		Age					
Year	No.	1	2	3	4	5	6
2011	4	3.1					
2010	29	2.8	4.6				
2009	11	2.4	4.6	6.1			
2008	5	2.7	5.0	6.3	6.9		
2007	6	3.1	5.1	6.6	7.0	7.3	
2006	1	2.6	5.4	6.7	7.0	7.2	7.4
Mean	56	2.8	4.7	6.3	7.0	7.2	7.4
Smallest		1.5	3.2	5.2	6.5	6.9	7.4
Largest		4.6	6.1	7.1	7.4	7.6	7.4
Std Error		0.1	0.1	0.1	0.1	0.1	
95% ConLo		2.6	4.5	6.1	6.8	7.1	
95% ConHi		2.9	4.9	6.5	7.1	7.4	

Intercept value = 0.00
Dataset = cfdagelm.d12

Table 174. Age frequency and CPUE (fish/hr) per inch class of bluegill collected during 1.00 hours of electrofishing at McNeely Lake during May 2012. Fish were collected in 7.5-minute runs.

	Inch class									Std
Age	2	3	4	5	6	7	Total	%	CPUE	err
1	2	4					6	1	6.00	1.47
2		18	105	132	17		272	51	272.00	37.09
3				66	68	10	144	27	144.00	16.12
4					51	10	61	12	61.00	6.31
5					17	25	42	8	42.00	5.02
6						5	5	1	5.00	0.71
Total	2	22	105	198	153	50	530	100	530.00	61.80
%	0	4	20	37	29	9	100			

Dataset = cfdagmcl.d12 and cfdpsmcl.d12

Table 175. Population assessment for bluegill collected during spring electrofishing at McNeely Lake from 2001-2012 (scoring based on statewide assessment).

Year		Mean length age-2 at capture	Years to 6.0 in	CPUE ≥6.0 in	CPUE ≥8.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2012	Value	4.6	2-2+	204.00	1.00	0.922	60.2		
	Score	3	4	4	1			12	Good
2011	Value	4.5	2-2+	158.40	1.60	1.001	63.3		
	Score	3	4	4	1			12	Good
2010	Value	4.7	2-2+*	96.00	0.00	0.610	46.0		
	Score	3	4	4	0			11	Good
2009	Value	4.9*	2-2+*	226.40	0.80	0.763	53.4		
	Score	3	4	4	1			12	Good
2008	Value	4.9	2-2+	206.40	0.00				
	Score	3	4	4	0			11	Good
2007	Value	4.8	2-2+	118.40	0.00	0.963	61.8		
	Score	3	4	4	0			11	Good
2006	Value	5.1	3-3+	101.00	0.00	0.597	45.0		
	Score	4	3	4	0			11	Good
2005	Value	4.0	3-3+	174.00	0.00				
	Score	2	3	4	0			9	Fair
2004	Value	3.9	3-3+	74.40	0.00	1.111	67.1		
	Score	2	3	3	0			8	Fair
2003	Value	3.9	3-3+	30.40	0.00	1.117	67.3		
	Score	2	3	2	0			7	Fair
2002	Value	4.2	2-2+	336.00	0.80				
	Score	2	4	4	1			11	Good
2001	Value	4.8	2-2+	202.40	1.60	0.926	60.4		
	Score	3	4	4	1			12	Good

* Age and growth data was not collected. Previous year's data was used for value

Table 176. Electrofishing CPUE (fish/hr) for each length group of redear sunfish collected from McNeely Lake from 1998-2012; numbers in parentheses are standard errors.

	Length group					
Year	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	≥10.0 in	Total
1998	0.00	0.70 (0.70)	5.30 (2.20)	1.30 (1.30)	0.00	7.80 (3.40)
1999	0.00	10.00 (3.80)	3.00 (1.90)	1.00 (1.00)	0.00	14.00 (3.50)
2000	0.00	3.30 (2.60)	14.70 (2.50)	0.70 (0.70)	0.00	18.70 (3.40)
2001	2.40 (1.70)	8.80 (3.00)	15.20 (4.80)	8.00 (4.80)	0.00	34.40 (7.80)
2002	1.60 (1.10)	49.60 (10.60)	22.40 (5.80)	6.40 (2.00)	0.00	80.00 (13.40)
2003	0.80 (0.50)	5.20 (1.20)	20.40 (3.80)	2.40 (1.20)	0.00	28.80 (5.40)
2004	0.00	4.80 (1.80)	24.80 (6.50)	25.60 (7.00)	0.00	55.20 (9.90)
2005	1.00 (1.00)	25.00 (5.90)	16.00 (6.60)	33.00 (11.80)	0.00	75.00 (17.00)
2006	1.00 (1.00)	15.00 (3.80)	20.00 (4.00)	16.00 (2.60)	0.00	52.00 (6.20)
2007	0.00	2.40 (1.70)	29.60 (6.80)	6.40 (2.30)	0.00	38.40 (8.80)
2008	6.40 (2.87)	22.40 (4.43)	38.40 (3.83)	36.00 (4.81)	1.60 (1.07)	103.20 (9.42)
2009	0.00	4.80 (3.20)	55.20 (11.28)	38.40 (9.53)	2.40 (1.22)	98.40 (21.83)
2010	0.00	9.60 (4.10)	16.00 (4.13)	8.80 (3.26)	0.80 (0.80)	34.40 (6.43)
2011	0.80 (0.80)	20.80 (5.87)	16.80 (3.03)	21.60 (4.63)	0.00	60.00 (9.02)
2012	0.00	21.00 (5.44)	62.00 (7.05)	34.00 (6.00)	0.00	117.00 (13.17)

Dataset = cfdpsmcl.d12

Table 177. Mean back calculated lengths (in.) at each annulus for otoliths from redear sunfish collected from McNeely Lake in 2012.

		Age				
Year	No.	1	2	3	4	5
2010	28	3.7	6.0			
2009	13	3.8	6.7	8.1		
2008	5	4.1	6.5	8.0	8.7	
2007	1	3.8	6.9	7.4	9.0	9.7
Mean	47	3.7	6.3	8.0	8.8	9.7
Smallest		2.7	4.8	7.0	7.7	9.7
Largest		5.5	7.3	9.1	9.5	9.7
Std Error		0.1	0.1	0.1	0.3	
95% ConLo		3.6	6.1	7.8	8.2	
95% ConHi		3.9	6.5	8.2	9.3	

Intercept value = 0.00
Dataset = cfdagelm.d12

Table 178. Age frequency and CPUE (fish/hr) per inch class of redear sunfish collected during 1.00 hours of electrofishing at McNeely Lake during May 2012. Fish were collected in 7.5-minute runs.

	Inch class									Std
Age	4	5	6	7	8	9	Total	%	CPUE	err
2	3	17	37	13			70	60	69.50	7.78
3				10	23		33	28	32.50	5.44
4				3	3	7	12	10	11.75	2.92
5						2	2	2	2.25	0.88
Total	3	17	37	25	25	9	116	100	116.00	13.17
%	3	15	32	22	22	8	100			

Dataset = cfdagmcl.d12 and cfdpsmcl.d12

Table 179. Population assessment for redear sunfish collected during spring electrofishing at McNeely Lake from 2001-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Years to 8.0 in	CPUE ≥8.0 in	CPUE ≥10.0 in	Total score	Assessment rating
2012	Value	8.1	3-3+	34.00	0.00		
	Score	4	4	4	0	12	Good
2011	Value	8.0	3-3+	21.60	0.00		
	Score	4	4	4	0	12	Good
2010	Value	8.1	2-2+	8.80	0.80		
	Score	4	4	2	1	11	Good
2009	Value	8.5*	2-2+*	38.40	2.40		
	Score	4	4	4	2	14	Excellent
2008	Value	8.5	2-2+	36.00	1.60		
	Score	4	4	4	1	13	Good
2007	Value	8.0	3-3+	6.40	0.00		
	Score	4	4	2	0	10	Fair
2006	Value	7.9	3-3+	16.00	0.00		
	Score	4	4	4	0	12	Good
2005	Value	8.3	3-3+	33.00	0.00		
	Score	4	4	4	0	12	Good
2004	Value	7.7*	4-4+*	25.60	0.00		
	Score	4	3	4	0	11	Good
2003	Value	7.7	4-4+*	2.40	0.00		
	Score	4	3	1	0	8	Fair
2002	Value	6.7*	4-4+*	6.40	0.00		
	Score	4	3	2	0	9	Fair
2001	Value	6.7	4-4+	8.00	0.00		
	Score	4	3	2	0	9	Fair

Table 180. Number of fish and the relative weight (Wr) for each length group of bluegill and redear sunfish collected at McNeely Lake on 14 September 2012. Standard errors are in parentheses.

Species	Length group							
	No.	Wr	No.	Wr	No.	Wr	No.	Wr
	3.0–5.9 in		6.0–7.9 in		≥8.0 in		Total	
Bluegill	79	95 (2)	47	91 (1)	1	86	127	93 (1)
	4.0–6.9 in		7.0–8.9 in		≥9.0 in		Total	
Redear sunfish	35	99 (1)	46	97 (1)	7	97 (1)	93	98 (1)

Dataset = cfdwrmcl.d12

Table 181. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 1.75 hours of 15-minute electrofishing runs in Williamstown Lake, April 2012; numbers in parentheses are standard errors.

Species	Inch class															Total	CPUE
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
Largemouth bass	5		2	2	6	5	7	7	4	3	7	5	1	1	3	58	33.14 (2.86)

Dataset = cfdpswil.d12

Table 182. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Williamstown Lake from 2007-2012; numbers in parentheses are standard errors.

	Length group					
Year	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	Total
2007	13.00 (4.26)	38.00 (7.01)	14.50 (2.82)	7.50 (1.40)		73.00 (10.84)
2008	17.00 (4.19)	42.50 (7.21)	29.00 (6.54)	7.00 (2.10)	0.50 (0.50)	95.50 (15.67)
2009	27.00 (5.06)	23.00 (4.12)	16.00 (2.62)	12.00 (2.51)	0.00 (0.00)	78.00 (10.11)
2010	15.33 (3.48)	28.33 (4.42)	25.67 (2.85)	10.67 (1.42)	0.00 (0.00)	80.00 (10.13)
2011	14.50 (2.92)	32.00 (2.93)	13.00 (1.81)	12.50 (3.96)	0.00 (0.00)	72.00 (7.09)
2012	4.00 (1.51)	11.43 (3.85)	8.00 (2.76)	9.71 (2.29)	0.00 (0.00)	33.14 (2.86)

Dataset = cfdpswil.d12 – d07

Table 183. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Williamstown Lake in 2012; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD_{15}
Largemouth bass	51	61 (± 14)	33 (± 13)

Dataset = cfdpswil.d12

Table 184. Mean back calculated lengths (in.) at each annulus for otoliths from largemouth bass collected from Williamstown Lake in 2012.

		Age						
Year	No.	1	2	3	4	5	6	7
2011	5	5.4						
2010	17	6.5	9.9					
2009	10	5.5	9.7	11.8				
2008	9	6.4	9.6	12.2	13.8			
2007	5	6.0	9.9	12.5	14.6	16.4		
2006	3	6.8	10.1	12.0	13.2	14.1	15.1	
2005	3	7.0	10.0	12.4	13.6	14.7	15.5	16.3
Mean	52	6.2	9.7	12.1	13.9	15.3	15.3	16.3
Smallest		3.4	5.4	9.8	11.2	12.6	14.0	14.9
Largest		8.9	12.0	14.7	16.8	19.2	17.5	18.5
Std Error		0.2	0.2	0.2	0.3	0.6	0.5	1.1
95% ConLo		5.8	9.3	11.7	13.3	14.1	14.3	14.2
95% ConHi		6.5	10.1	12.5	14.5	16.5	16.3	18.5

Intercept value = 0.00
Dataset = cfdagwil.d12

Table 185. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 1.75 hours of electrofishing at Williamstown Lake during April 2012. Fish were collected in 15-minute runs.

	Inch class																		Std
Age	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	%	CPUE	err
1	5															5	9	2.86	1.44
2			2	2	6	3	2	1								16	28	9.14	2.40
3						3	5	2	2							12	20	6.57	1.52
4								2	2	2	4					10	17	5.50	1.19
5								1				3	1		3	9	15	4.86	1.90
6										1	2	2				4	7	2.30	0.26
7										1	2			1		3	6	1.91	0.54
Total	5		2	2	6	5	7	7	4	3	7	5	1	1	3	58	100	33.14	2.86
%	9		3	3	10	9	12	12	7	5	12	9	2	2	5	100			

Dataset = cfdagwil.d12 and cfdpswil.d12

Table 186. Population assessment for largemouth bass collected during spring electrofishing at Williamstown Lake from 2008-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Total score	Assessment rating
2012	Value	11.8	2.86	8.00	9.71	0.00		
	Score	4	1	1	2	0	8	Fair
2011	Value	11.6*	9.00*	13.00	12.50	0.00		
	Score	4	1	1	2	0	8	Fair
2010	Value	11.6*	9.00*	25.67	10.67	0.00		
	Score	4	1	2	2	0	9	Fair
2009	Value	11.6*	24.50	16.00	12.00	0.00		
	Score	4	2	1	2	0	9	Fair
2008	Value	11.6	12.50	29.00	7.00	0.50		
	Score	4	1	2	2	1	10	Fair

* Age data not collected, use previous year's data

Table 187. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass and bluegill collected in 0.50 hours of electrofishing in Lincoln Homestead Lake, March 2012; numbers in parentheses are standard errors.

	Inch class																						
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE
Bluegill	8	14	45	43	11	32	1															154	308.00 (28.00)
Redear sunfish			3	1	1		1	2	3													11	22.00 (18.00)
Largemouth bass		1	5	10	13	7			11	13	19	6	9	3	3			1			1	102	204.00 (20.00)

Dataset = cfdpslhl.d12

Table 188. Relative abundance and CPUE (fish/hr) of largemouth bass collected in 0.50 hours of electrofishing in General Butler State Park Lake, March 2012; numbers in parentheses are standard errors.

	Inch class															Total	CPUE
Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
Largemouth bass	5	6		11	21	11	7	4	4	1	2	1	2		1	76	152.00 (8.00)

Dataset = cfdpsgbs.d12

NORTHEASTERN FISHERY DISTRICT

Project 1: Lake and Tailwaters Fishery Surveys

FINDINGS

Dates, temperatures, secchi depths and other pertinent sampling information during the 2012 season can be found in Table 1.

Cave Run Lake (8,720a)

Muskellunge Sampling

Muskellunge were sampled during 12, 13, 15 April for a total of 18 hours (12- 30-minute runs) within all sections of the lake. Overall, a total of 169 fish were captured resulting in catch rate of 9.39 fish per hour (fish/hr) ranging in size from 12.0 to 49.0 in. Fish captured by section decreased from the upper to the lower section; however, length groups remained fairly consistent within sections. The most notable decline in catch rates was observed for young-of-year muskellunge in the upper section where it was later found that no fish were stocked during the fall of 2011 (Table 2). With the recent changes in both the size limit (increased to 36.0 inches in 2009) and creel limit (decreased to 1 fish per day in 2006) there is some concern of the possibility of a drop in condition of the fish with additional individuals in the system. In 2012, all length groups showed a drop in the mean W_r when compared to 2011. When considering standard errors surrounding these means, all length groups showed statistically significant drops (Table 3). The value for those fish ≥38.1 in fell within the 10 year mean but has shown a steady decline since 2009. Beginning in 2003, trends in values (increasing or decreasing) for all length groups have not occurred for more than 3 consecutive years. The overall assessment rating of the muskellunge population at Cave Run Lake increased by 1 point and is still considered to be "Good" (Table 4). Management objectives for catches of ≥ 20.0, 30.0, 36.0 and 40.0 in fish were all met in 2012.

Age-1 muskellunge continued to be fin clipped to mark year classes prior to their fall stocking. The clipping rotation is given in the table below:

Year	Fin Clipped	Number Stocked	Date Stocked	Average Length (in)
2012	Left Pelvic	1,923	10/31	12.7
2011	Right Pelvic	2,800	9/26-9/27	12.8
2010	Left Pectoral	2,811	9/20-9/21 10/25	12.5

Black Bass Sampling (Spring)

During 03-05 April, black bass were sampled in each of the upper, middle and lowers sections for a total of 6.0 sample hours (2.0 hours in each section) of nocturnal electrofishing. The last time reliable data was collected from the lake was in 2007 (2008-malfunctioning electrofishing boat; 2009-2011- high water). Of the black bass sampled (Table 5) 62.3% were largemouth bass (177.83 fish/hr), 36.5% spotted bass (104.17 fish/hr), and 1.2% smallmouth bass (3.50 fish/hr). Catch-per-unit-effort values for largemouth bass length group comparisons (Table 6) shows all values exceeding the mean for those samples collected from 1998-2008 excluding 2002 where high water prevented sampling. Table 7 compares proportional and relative stock density values for the three black bass species collected per lake section. Otoliths were removed from largemouth bass (approximately 10 per inch class) in order to determine growth based upon back calculated lengths (Table 8). Largemouth bass ranged from age-1 (2011 year class) to age-6 (2006 year class). The mean length for each age of fish collected (age-1 through age-6) showed a decline from 2007 which was the last time age determinations were conducted.

The greatest decline in mean length (0.9 in) was observed for age-6 fish. Table 9 shows that 84% of the bass collected were age-1 (3.0-7.0 in), age-2 (7.0-11.0 in) and age-3 (10.0-13.0 in). Of the 230 age-3 fish collected, a total of 18 bass 13.0-13.9 in fell within the 13.0-16.0 in protective slot limit. Table 10 compares the CPUE by age and year from 1999 to 2012. Overall assessment values (Table 11) for the largemouth bass population at Cave Run Lake produced a rating of "Good". Table 12 shows population assessment ratings relative to evaluating the 13.0-16.0 inch slot limit which was initiated in 1996. Values for the 13.0-13.9 in and ≥ 16.0 in parameters indicate the slot limit continues to produce larger bass as was its intention. The "slot limit" assessment also rates the bass fishery as "good". All lake management goals were met.

Black Bass Sampling (Fall)

On 18- 21 September Cave Run Lake was sampled for age-0 largemouth bass parameters for the Bass Stocking Initiative (BSI). The BSI only assesses year class strength at age-0 and age-1. Therefore, when collecting fish during the fall sampling for the BSI, a general maximum length limit for those fish to be collected (all black bass) was set at approximately 2.0 in. greater than the historical maximum size range for age-1 largemouth bass in the spring to make sure all age-0 largemouth bass encountered were collected (the length of fish to be collected was ≤ 9.0-in). Only data on largemouth bass was subsequently analyzed. The change in sampling protocol is due to attempts to increase sampling efficiency and relevancy. In total, 699 largemouth bass ≤ 9.0 in. were captured in 6.0 hours (2.0 hours in each section, 12- 30-minute runs) of nocturnal electrofishing. Of the total largemouth bass sampled in the three sections of the lake, 557 (79.7%) were collected in the upper section, 70 (10.0%) in the middle section and 72 (10.3%) in the lower section (Table 13). The primary objective of the BSI is to evaluate the current years spawn, index this spawn and decide if the lake needs supplemental stocking to offset a perceived poor spawn. For 2012, the spawn was determined to be a success and the lake did not need supplemental stocking (Table 14).

Crappie Electrofishing (Spring)

Up until 2004, all sections of the lake were sampled each year for crappie using trap nets during the fall. Beginning in 2005, due to historically poor catch rates in the middle and lower sections, only the upper section has been sampled using trap nets. In attempts to better evaluate the crappie population, during 19-20 March, the lake was sampled for the first time during the spring utilizing diurnal electrofishing to investigate and compare spring electrofishing to fall trap netting. The upper, middle and lower sections were sampled for a total of 3.0 hours (4-15-minute runs per section). A total of 336 crappie were collected (Table 15). White crappie comprised 81.5% (274 total) and black crappie made up 18.5% (62 total) of the total sample. The upper section accounted for 91.0% of the total catch, while the middle (4.8%) and the lower (4.2%) sections were much lower. Further spring sampling is necessary in order to make proper gear comparisons.

Crappie Trap Netting

During 05-09 November, trap nets were set in the upper (8 nets) and lower (7 nets) sections of Cave Run Lake for a total of 60 net-nights (nn). During 2005-2011, 15 nets were set only in the upper section and beginning in 2012, seven nets from unproductive upper net sites were moved to the lower section in efforts to better assess the crappie population lake wide. A total of 582 crappie were caught (522 in the upper section and 22 in the lower section). As is typical, the majority of the fish captured were white crappie (91.6% of total) ranging in length from 2.0-12.0 in (Table 16) and not enough black crappie were sampled to make accurate assessments of the population. The PSD for white crappie was 13 and for black crappie was 24 (Table 17). Otoliths were collected from white and black crappie for age determinations and both species continue to exhibit slow growth (Tables 18 and 19). However, when comparisons are made between the age and growth from 2002 and 2012, there is a notable increase in mean length for those crappie age-1 through age-5. On average, those fish age-3 through age-5 showed an increase in growth of 2.0-in over this period. Back calculated lengths showed white crappie up to age-5 (Table 18). Numbers of older crappie (≥ age-3) dropped rapidly, most probably due to angler mortality (Table 20). Only two of the four obtainable lake management goals for white crappie were met (total CPUE of crappie excluding age-1 was 5.83 fish/nn; goal is ≥ 4.40 fish/nn and CPUE of ≥ 2.76 age-0 crappie/nn; goal is 1.79 fish/nn). Black crappie age and growth and age frequency can be found in Tables 19 and 21. The assessment values determined for the white crappie population rated the population to be "Poor" (Table 22). Even though the population has been determined to be poor, angler satisfaction continues to be extremely high in the quality and quantity of their catch.

Miscellaneous

In the winter of 2011 around 150 recycled Christmas trees were used to refresh (1 site) and create (2 sites) fish attractors sites in the lake. In addition two of the Christmas tree sites were converted to plastic pallet sites (6 units at each site). The assistance received from Minor Clark Fish Hatchery staff as well as USFS personnel make this project possible. During the fall, 1,923 muskellunge (a reduction of 877 fish from the annual desired stocking rate) which averaged 12.7 in. were stocked into the lake.

Grayson Lake (1,512a)

Black Bass Sampling (Spring)

On 18 April 2012 the middle and lower sections of Grayson Lake were nocturnally electrofished (4- 30-minute runs, 2.0 hours in each section) for black bass population assessment. Muddy water conditions prohibited sampling of the upper reaches of the lake. In total, 982 fish were captured ranging in size from 3.0 to 20.0 in (Table 23). Of these, 50.1% came from the lower section and 49.9% came from the middle section. The overall makeup of the populations of black bass was 752 largemouth bass (76.6%), 229 spotted bass (23.3%) and 1 (0.1%) smallmouth bass. The majority of the largemouth bass came from the middle section (57%). Of the 752 largemouth bass, 22 (2.9%) were stocked fish from the 2010 young of year supplemental stocking (Table 24). The overall catch in 2012 was the highest recorded since 2004 and all inch classes increased from 2009 values (the last year the lake was sampled) except for the ≥ 20.0 in class (Table 25). The PSD and RSD_{15} of largemouth bass in Grayson Lake continue to be low because Grayson Lake produces higher numbers of small fish that are unable to make it through to 12.0 in (Table 26). The overall assessment of the largemouth bass fishery in Grayson Lake was good, which is an improvement over the 2009 assessment (Table 27). This increase was most likely due to the increase in catch of age-1 fish.

Black Bass Sampling (Fall)

On 25 – 27 September the upper, middle and lower sections of Grayson Lake were nocturnally electrofished (9- 30-minute runs, 1.5 hours in each section) for black bass young of year assessment and relative weights (W_r) of fish over 8.0 in. In total 1,307 fish were captured ranging in size from 2.0 to 20.0 in (Table 28). Of these, 46.2% came from the middle section, 33.6 % from the lower section and 20.2% from the upper section. The overall makeup of the populations of black bass was 982 (71.7%) largemouth bass, 376 (27.4%) spotted bass and 12 (0.9%) smallmouth bass. The majority of the largemouth bass came from the middle section (46%) and equal numbers came from the lower and upper sections (27%). The W_r were low for the 8.0 – 11.9 in and 12.0 – 14.9 in length groups (lower 80% range for both) and higher for the ≥ 15.0 in length group (the 100% range; Table 29). The numbers of age-0 fish increased in 2012 so there was no need for a supplemental stocking of largemouth bass (Table 30).

Crappie Fall Electrofishing

On 15 October the upper reaches of Grayson Lake were diurnally electrofished (6- 15-minute runs, 1.5 hours total) for an assessment of the crappie populations. As opposed to years past there was not a trail boat used in this sample due to personnel constraints. In total, 217 fish were captured ranging in size from 3.0 to 13.0 in (Table 31). Of these, 208 (95.9%) were white crappie and 9 (4.1%) were black crappie. The PSD and RSD_{10} values continue to be on the lower side (Table 32) and the overall assessment of the white crappie (based on lake specific assessments) was good (Table 33). The assessment score has been steady since 2011.

Miscellaneous

In the winter of 2012 (November 2011 to March 2012) 4 habitat sites were created in the lake; please see Project 4 for more information.

Lake Carnico (114a)
Black Bass Electrofishing (Spring)

On 04 April the shoreline of Lake Carnico (Nicholas County) was nocturnally electrofished for black bass. A total of 202 largemouth bass were captured ranging in size from 3.0 to 19.0 in (Table 34). Of the 1,500 remedial bass stocked during the fall of 2012 (right pectoral fin clipped), twenty six were recaptured representing 12.9% of the total catch and 36.1% of those fish collected < 8.0-in. When comparing CPUE for length groups from 2000-2012, only two length groups (< 8.0 in and ≥ 15.0 in) showed improvement over the 13 year CPUE mean value (Table 35). PSD and the RSD_{15} values remain within the acceptable range and comparisons to past years can be found in Table 36. The population assessment rating for the bass fishery remains "Fair" (Table 37).

Bluegill / Redear Sunfish Sampling

On 09 May the shoreline of Lake Carnico was diurnally electrofished for sunfish species. Only those sunfish ≥ 3.0 in were collected. A total of 435 sunfish were captured; 82 were bluegill and only 12 were redear sunfish and the remainder was green sunfish and longear sunfish (Table 38). CPUE for various length groups of bluegill and redear sunfish can be found in (Table 39). Bluegill PSD values remain well below the desired level (Table 40). Samples for age and growth determinations were not collected so no population assessment value for 2012 is given (Table 41).

Vegetation Survey

In an effort to investigate whether or not the densities of aquatic vegetation are negatively affecting the sunfish population an aquatic vegetation survey was conducted on 13 August. Procedures for this sample were modified from the Long Term Resource Monitoring Program Vegetation component (Yin et al. 2000). Fifty sample sites at depths ≤ 10 feet were chosen randomly to be sampled around the lake. The sampling protocol divided the types of plants observed into ecological categories based on the plant type and are shown in Table 42. Of the 50 sites, 54% were unvegetated, 42% had some form of submerged aquatic vegetation and 2% had non-rooted floating aquatic vegetation (Table 43). There were no observations of emergent or rooted-floating vegetation. A total of 4 species of aquatic vegetation was found with coontail (*Ceratophyllym demersum*) being the most frequent species collected (Table 44). The mean depth at which aquatic vegetation was found was 5.52 feet and no vegetation was found below a mean depth of 7.70 feet (Table 45). The frequency of substrate types and their association with vegetation can be found in Table 46.

Generally during late spring, over the past 6 years, secchi disc readings average 3.8 feet (ranging from 3.0-4.5 feet). The secchi disc reading during this study averaged 2 feet which created concern that the amount of turbidity may have been a limiting factor in plant growth. Henceforth, a second study is scheduled to be conducted in 2013.

Black Bass Electrofishing (Fall)

On 10 September the shoreline of Lake Carnico was diurnally electrofished for a total of 1.5 hours (3-0.5 hour runs) in order to collect largemouth bass specimens for age and growth determination purposes only. Results will be reported in 2013.

Miscellaneous

In attempts to increase predation on the sunfish population, the lake received a supplemental stocking of 1,501 remedial bass during October 2011 and 904 in 2012.

Clear Creek Lake (40a)
Black Bass Electrofishing (Spring)
On 19 April the lake was sampled for a total of 22.5 minutes (3- 7.5-minute runs) at night for largemouth bass. The lake has not been sampled for the last two years due to aquatic vegetation problems and high water conditions. One hundred and twenty eight largemouth bass were collected which ranged in length from 4.0-23.0 in (Table 47).

When comparing CPUE for length groups (Table 48), the most notable increase was for those fish 8.0-11.9 in long (234.67 fish/hr in 2012 and 36.00 fish/hr in 2009).
The CPUE for those bass ≥ 15.0 in also showed an increase from past years. Proportional Stock Density values fell well below the acceptable range (Table 49). The population assessment rates the largemouth bass fishery as "Good" (Table 50).

Bluegill/Redear Sunfish Electrofishing

On 10 May the shoreline of Clear Creek Lake (Bath Co.) was diurnally electrofished (4- 7.5-minutes runs) for bluegill and redear sunfish. A total of 65 bluegill and 73 redear sunfish were collected (Table 51). Table 52 shows the CPUE for each length group of bluegill and redear sunfish collected. The PSD value (43) for bluegill now falls within the desirable range (Table 53). An assessment score for the bluegill and redear sunfish was not provided in Tables 54 and 55, respectively, and will only be reported, in those years where exact age and growth determination are made (i.e. otoliths are removed for aging). However, those CPUE assessment values not related to age and growth for bluegill and redear sunfish will be reported each year. This lake continues to be infested with Eurasian water milfoil.

Greenbo Lake (181a)
Black Bass Electrofishing (Spring)

The shoreline of Greenbo Lake (Greenup Co.) was nocturnally electrofished on 16 April. A total of 315 largemouth bass were collected resulting in a CPUE of 210.00 fish/hr (Table 56). Of the total number of largemouth bass collected (315) only 5 stocked fish were found comprising 1.6% of the catch (Table 57). Only those fish stocked during 2010 were captured. During 2007, 2008 and 2010, a total of 6,340 bass were stocked and to date only 0.4% of the stocked fish have been collected. Catch rates for largemouth bass by length group can be found in Table 58. For comparison purposes, low catch rates experienced in 2008 may be attributed to a malfunctioning electrofishing boat. Of the three management objective goals for catch rates related to length frequency, two met or exceeded those objectives specified in the lake management plan for all length group categories: 12.0-14.9 in bass (objective = ≥40.00 fish/hr, actual = 64.67 fish/hr), ≥15.0 in bass (objective = 10.00 fish/hr, actual = 8.67 fish/hr), ≥20.0 in bass (objective = 2.00 fish/hr, actual = 2.00 fish/hr). Largemouth bass PSD remained within the desired range with a value in 2012 of 40 (Table 59). Electrofishing catch rates for each age of largemouth bass from 2000 through 2012 are shown in Table 60. Age and growth rates remain constant or have increased slightly from the last time bass were aged from this lake with largemouth bass reaching 12.0-in between age-3 and 4 and 15.0-in between age-5 and 6 (Table 61). Age frequency results can be found in Table 62. The population assessment rates the largemouth bass fishery as "Good" (Table 63). An assessment rating of the largemouth bass population was not included in Table 63 and will, from this year forward, only be reported in those years were exact age and growth determination are made (i.e. otoliths are removed for aging).

Bluegill/Redear Sunfish Electrofishing (Spring)

Daytime electrofishing for bluegill and redear sunfish was conducted on 07 May. Only those sunfish ≥ 3.0 in. were collected. A total of 442 bluegill and 8 redear sunfish were collected (Table 64). Catch rates by length groups of bluegill and redear sunfish can be found in Table 65. Bluegill PSD was 22 which showed an increase from 2011 (13; Table 66). An assessment rating for the bluegill population has been included in Table 67 but results for length at age and years to 6.0-in are based on age and growth data collected in 2008. Only 8 redear sunfish (ranging in size from 1.0-10.0 in) were sampled in 2013 compared to 18 in 2011, 35 in 2010, 5 in 2009, 19 in 2008 and 30 in 2007. Too few redear sunfish are collected to make accurate population assessments. During 2003-2005, 181,500 one inch redear sunfish were stocked into the lake.

Black Bass Electrofishing (Fall)

On 24 September the largemouth bass population was sampled for age-0 largemouth bass parameters for the Bass Stocking Initiative (BSI). Therefore, when collecting fish (diurnally) during the fall sampling for the BSI, a general maximum length limit for largemouth bass collected was set at approximately 2.0 in. greater than the historical maximum size range for age-1 largemouth bass in the spring to make sure all age-0 largemouth bass encountered were collected (the maximum length of fish to be collected was ≤ 8.9-in).
The change in sampling protocol is due to attempts to increase sampling efficiency and relevancy. A total of 333 largemouth bass were collected in 1.5 hours of electrofishing (6- 15-minute runs; Table 68). Largemouth bass indices of year class strength at age 0 and age 1 are found in Table 69. Due to these indices Greenbo Lake did not receive a supplemental stocking of remedial bass. Poor spawning success during 2010, 2008 and 2007 warranted the supplemental stocking of 3.0-5.0 in bass (2,724 in 2010, 2,715 in 2008 and 925 in 2007).

Mill Creek Lake (41a)
Black Bass Electrofishing (Spring)

On 01 May 2012 Mill Creek Lake was nocturnally electrofished (4- 15-minute runs; 1.0 hour total) for black bass population assessment. In total, 159 black bass were collected; this included 158 largemouth bass and 1 smallmouth bass (Table 70). Largemouth bass ranged in size from 3.0 to 22.0 in. The overall catch was down slightly from 2010 but still right on track with the 1990 – 2011 average (Table 71). Catches of fish <8.0 in were slightly lower than average. Catches of 8.0 – 11.9 in, ≥15.0 in and ≥20.0 in bass were all above average and catches of 12.0-14.9 in bass showed no change over the average. The PSD shifted out of the balanced range due to the increase in the numbers of 8.0 – 11.0 in fish, but the RSD_{15} still argued for a quality population (Table 72). The assessment rating of the largemouth bass population at Mill Creek Lake was good, primarily due to the high numbers of fish over 20.0 in (Table 73).

Sunfish Electrofishing

On 17 May Mill Creek Lake was diurnally electrofished (4- 15-minute runs; 1.0 hour total) for sunfish population assessment. In total, 314 fish were collected (Table 74). Of these, the dominant species continues to be bluegill (259 fish; 82.5%) followed by green sunfish (30 fish; 9.6%), longear sunfish (24 fish; 7.6%) and hybrid sunfish (1 fish; 0.3%). Bluegill captured ranged in size from 3.0 to 9.0 in. Only fish over 3.0 in were collected due to the variability in the <3.0 in class of fish (variability due to water temperature and relation of the sampling time and the spawn). For this reason a new column was created in Table 75 illustrating what the catch per unit effort (CPUE) would be in prior years if the <3.0 in fish were removed from the sample. This, arguably, creates a more realistic view of the populations for year to year comparison purposes. Using this, 2012 was above average (in every length group and in overall catch; Table 75). The PSD and RSD_8 exhibit a balanced bluegill population (Table 76). The assessment rating in Mill Creek Lake was good, and would probably be better with an improvement in the age and growth characteristics (Table 77).

Lake Reba (76a)
Black Bass Electrofishing (Spring)

On 16 April Lake Reba was nocturnally electrofished (6- 15-minute runs; 1.5 hours total) for black bass population assessment. As usual, only largemouth bass were captured ranging in size from 3.0 to 22.0 in (Table 78). Of the 418 fish sampled, 12 (2.9%) were stocked fish from the 2010 (10 fish, size 9.0 to 10.0 in) and 2009 (2 fish, size 12.0 in) stockings (Table 79). The overall catch rate was slightly higher than the 1995 to 2011 average, but was still down from 2011 (Table 80). In fact, fish in the 8.0 to 11.9 in, 12.0 to 14.9 in and ≥ 15.0 in length groups were down from 2011, while the other 2 length groups showed a slight increase (<8.0 in) or no change (≥ 20.0 in). The PSD and RSD_{15} both showed a balanced largemouth bass population (Table 81). The overall assessment for the population of largemouth bass in Lake Reba was good (Table 82).

Sunfish electrofishing

On 16 May Lake Reba was diurnally electrofished (8- 7.5-minute runs; 1.0 hour total) for assessment of the sunfish population. In total, 471 fishes were sampled (Table 83). Of these, 189 (40.1%) were bluegill, 174 (36.9%) were redear sunfish, 89 (18.9%) were warmouth, 16 (3.4%) were hybrid sunfish and 3 (0.6%) were green sunfish. The bluegill collected ranged in size from 3.0 to 8.0 in. Only fish over 3.0 in were collected due to the variability in the <3.0 in class of fish. For this reason a new column was created in Table 84 illustrating what the catch per unit effort (CPUE) would be in prior years if the <3.0 in fish were removed from the sample. This year's sample showed a sharp decline from the 2011 sample when the overall CPUE, excluding <3.0 in, were compared year to year. However, this year's sample was still higher than the 1995 – 2011 average, and the 6.0 – 8.0 in and the ≥ 8.0 in length groups both were higher than 2010. The PSD also showed a balanced bluegill population and there were no fish over 8.0 in collected to produce a RSD_8 value (Table 85). Bluegill were collected to determine age and growth characteristics for the population in 2012. There was no change in the key characteristics from the last time age and growth characteristics were collected (2008). Bluegill reach 6.0 in by their third year (Table 86). Within their first year bluegill grow 2.6 in on average and then add 1.4 inches in each of their second and third years and 0.6 inches in their fourth year. The majority of the bluegill collected in 2012 were 1 to 3 years old (Table 87). The overall assessment for the bluegill population at Lake Reba was fair (Table 88).

The redear sunfish collected in the 16 May sample of the sunfish population ranged in size from 3.0 to 8.0 in. Similar to the bluegill population, the redear sunfish showed a sharp decline from 2011 population numbers, but an increase over 2010 (except for the 3.0 – 6.0 in length group; Table 89). PSD values showed that 20% of the fish population was over quality size (7.0 in.) and no fish over 9.0 in were collected to determine a RSD_9 value (Table 90). Redear sunfish were also collected for age and growth determination. Both the length at age-3 and the years to 8.0 in declined over the last time age and growth characteristics were looked at (2008). Redear sunfish in Lake Reba reach 8.0 in by age 6 (Table 91). By the end of their first year the average growth of redear sunfish was 3.1 in; they then add 1.6 inches in year 2, 1.1. inches in year 3, 1.0 inches in year 4, 0.5 inches in year 5 and 0.8 inches in year 6. The majority of the redear in the lake are 1 or 2 years old (Table 92). The overall assessment of the redear sunfish population in Lake Reba was poor (Table 93).

Black Bass Electrofishing (Fall)

On 17 September Lake Reba was diurnally electrofished (5- 15-minute runs, 1- 10-minute run; 1.42 hours total) for assessment of the age-0 largemouth bass population. Only largemouth bass under 10.0 in were collected for determination of statistics needed for the bass stocking program. In total, 379 fish between 2.0 and 10.0 in were collected (Table 94). These indices showed a decline over 2011, but all were still above the 2003 – 2011 average (Table 95). For these reasons, Lake Reba was not stocked in 2012.

Rebel Trace Lake (19a)

Black Bass Electrofishing (Spring)

On 19 April the lake was nocturnally electrofished to assess the largemouth bass population. Only one run of 15 minutes could be accomplished due to the abundance of aquatic vegetation limiting access. Too few largemouth bass were collect (14) making it impossible to properly evaluate this population. Therefore no data is included in this section.

Bluegill/Redear Sunfish Electrofishing (Spring)

Daytime electrofishing for bluegill and redear sunfish was conducted on 23 May for a total of 22.5 minutes (3- 7.5-minute runs). A total of 47 (125.33 fish/hr) bluegill and 100 (266.67 fish/hr) redear sunfish ≥ 3.0 in were collected (Table 96). Catch rates by length groups of bluegill decreased substantially for those fish 3.0 to 5.9 in and is most probably a result of the aquatic vegetation limiting catch rates (Table 97). PSD values for both bluegill (49) and redear sunfish (37) increased from those values in 2011 and are shown in Tables 98 and 99, respectively. The population assessments for bluegill and redear sunfish can be found in Table 100 and 101 but only those values for CPUE not dealing with age are reported.

Smoky Valley Lake (36a)
Black Bass Electrofishing (Spring)

On 23 April Smoky Valley lake was nocturnally electrofished (3- 15-minute runs, 1- 9-minute run; 0.90 hours total) for assessment of the largemouth bass population. In total, 201 bass were collected ranging in size from 1.0 to 17.0 in (Table 102). Comparing the catch rates to those of 2011, there was no change and the numbers continue to be higher than they were in 2010 (Table 103). The PSD and RSD_{15} values were still low (Table 104). In 2012 largemouth bass were collected for determination of age and growth characteristics. Using this data, largemouth bass reach 12.0 inches in year 4 or 5 (Table 105) and 84% of the bass are 1 to 2 years old (Table 106).
The primary use of this age data was to determine if there were any changes over the 2007 age data, which would signify that the current regulation (no minimum size limit, 6 fish creel limit) was working to thin the bass enough to improve the growth. Using only the fish 4 years old and under, growth to all ages improved over 2007 (Table 107), as did the spread of inches within a specific age (Table 108). Probably more telling in the changes under the current regulation are the incremental growth rates (Table 109), which showed that fish grew an additional 0.31 in from age-1 to age-2, an additional 1.20 in from age-2 to age-3, and an additional 0.53 in from age-3 to age-4. Using this information, along with creel survey data collected in 2011, KDFWR is going to change the current regulation at Smoky Valley Lake to a regulation that allows for anglers to continue improving these growth characteristics, but accounts for excessive harvest of larger fish. These regulations are still pending with the commission. The overall assessment of the largemouth bass population at Smoky Valley Lake was fair, which is a considerable boost from recent years (Table 110).

Sunfish Electrofishing

On 18 May Smoky Valley Lake was diurnally electrofished (3- 15-minute runs, 1- 13.5-minute runs; 0.97 hours total) for assessment of the sunfish population. In total, 340 fishes were sampled (Table 111). Of these, 231 (67.9%) were bluegill, 94 (27.6%) were green sunfish, 13 (3.8%) were longear sunfish and 2 (0.6%) were hybrid sunfish. Bluegill collected ranged in size from 3.0 to 8.0 in. The overall harvest was an improvement over 2011 and 2010 in all categories except the < 8.0 in length group (Table 112). PSD and RSD_8 values are still low and show the bluegill population to be out of balance (Table 113). Bluegill were collected for determination of age and growth characteristics. Data showed that the growth to age had improved over 2008 (last time it was sampled; Table 114) and the majority of the fish are age-1 (77%; Table 115). The overall assessment of bluegill at Smoky Valley Lake improved over 2008 to fair (Table 116).

Lake Wilgreen (169a)
Black Bass Electrofishing (Spring)

On 17 April Lake Wilgreen was nocturnally electrofished (6- 15-minute runs; 1.5 hours total) for assessment of the largemouth bass population. In total, 452 largemouth bass were collected ranging in size from 3.0 to 21.0 in. (Table 117). The overall catch rate (301.96 fish/hr) was an improvement from 2011, and all length groups exhibited this improvement except the <8.0 in class (Table 118). Both the PSD (51) and RSD_{15} (32) show Lake Wilgreen to be in the "big bass" management strategy (Table 119). This is a shift from the "balanced" management strategy in the mid-90's. The overall assessment rating of the largemouth bass population at Lake Wilgreen was excellent (Table 120). This is the first excellent rating of largemouth bass at Wilgreen since 1997.

Sunfish Electrofishing

On 15 May Lake Wilgreen was diurnally electrofished (10- 7.5-minute runs; 1.25 hours total) for sunfish population assessment. In total, 1,026 fish were collected (Table 121). Bluegill continue to be the dominant sunfish species in our samples (891 fish, 86.8% of total), followed by green sunfish (68 fish, 6.6% of the total), redear sunfish (52 fish, 5.1% of total), warmouth (9 fish, 0.9% of total) and hybrid sunfish (6 fish, 0.6% of total). The bluegill collected ranged in size from 3.0 to 6.0 in. Only fish over 3.0 in were collected due to the variability in the <3.0 in class of fish. For this reason a new column was created in Table 122 illustrating what the catch per unit effort (CPUE) would be in prior years if the <3.0 in fish were removed from the sample. Using this category, the value of fish collected in 2012 was higher than the 1990 – 2011 average and there was little change over the 2011 values for all length groups. The PSD (10) echoes the PSD and RSD_{15} values collected with the largemouth bass sampled as the lake being in the "big bass" management strategy (Table 123).

There were no bluegill over 8.0 in. collected to determine the RSD_8 of bluegill. Bluegill were collected to determine age and growth characteristics for the population, in 2012. Data showed a decline in length to age from the last time age and growth were collected in 2007. Bluegill grew to 2.4 in at age-1 and added 1.8 inches in age-2, another 0.9 inches in age-3, and 1.1 inches in the next 3 years (Table 124). The majority of the fish collected were ages 1 to 3 (Table 125). The overall assessment rating of the bluegill collected in Lake Wilgreen was fair (Table 126).

Redear sunfish collected ranged in size from 3.0 to 8.0 in. The overall catch rate was very similar to 2011 and continued on a slight upward trend (Table 127).
PSD values were down in 2012, and continued the downward trend observed in recent years. There were no fish over 10.0 in collected to be able to determine RSD_9 (Table 128). Redear sunfish were collected to determine age and growth characteristics for the population, in 2012. These values showed that on average redear reach 3.2 inches in their first year and added another 2.1 inches in their second year, 1.3 inches in their third year, 0.6 inches in their fourth year and 1.0 inches in their fifth year (Table 129). As far as the age spread, there was a fairly even spread from 1 to 5 years (Table 130). The overall assessment of the redear sunfish population at Lake Wilgreen was fair (Table 131).

Beech Fork Water Control Reservoir (61a)

Species composition, relative abundance and CPUE of fishes collected in 0.5 hours (2- 15-minute runs) of diurnal electrofishing on 09 April from Beech Fork Lake (Powell Co.) are shown in Table 132. This lake is a water supply reservoir for Powell Co.; is infertile and most probably heavily fished. The last time this lake was sampled was during 2004, and in 2012, similar sampling results were attained.

Table 1. Yearly summary of sampling conditions by waterbody, species sampled and date.

Water body	Species	Date (2012)	Time (24hr)	Gear	Weather	Water Temp (°F)	Water level	Secchi (in)	Conditions	Pertinent sampling comments
Cave Run Lake	Muskie	3/12	900	electro	overcast/rain	48.00	730.49	21	fair	no YOY were found, none were stocked
Cave Run Lake	Muskie	3/13	900	electro	prt. cloudy	48.80	730	10	fair	
Cave Run Lake	Muskie	3/15	900	electro	cloudy/rain	53.00	729.42	16	fair	
Cave Run Lake	WC/BC	3/19	900	electro	sunny/clear	60.30	728.998	26	good	upper/middle sections done
Cave Run Lake	WC/BC	3/20	900	electro	sunny/clear	62.10	728.7	24	good	lower section done
Cave Run Lake	LMB	4/3	2000	electro	overcast/hot	66.8	726.19		good	conductivity = 139.3; D.O. = 6.60, ph = 7.43
Cave Run Lake	LMB	4/4	2030	electro	clear/cool	68.36	726.27	48	good	conductivity = 139.7; D.O. = 8.08, pH = 8.08
Cave Run Lake	LMB	4/5	2030	electro	clear/cool	63.5	726.44		good	conductivity = 138.3; D.O. = 6.80
Cave Run Lake	LMB	9/18	2030	electro	clear/cool	73.1	730.03	38	good	conductivity = 179.3 µS/m, only collected ≤ 9.0" LMB
Cave Run Lake	LMB	9/19	2030	electro	clear/cool	74	730.35	36	good	conductivity = 168.6 µS/m, only collected ≤ 9.0" LMB
Cave Run Lake	LMB	9/20	2030	electro	clear/cool	74.5	730.28		good	only collected ≤ 9.0" LMB
Cave Run Lake	WC/BC	11/6	800	Trap Net	clear/cold	45.40	725.74		good	Lower section averaged 9° F warmer
Cave Run Lake	WC/BC	11/7	800	Trap Net	overcast/warm	47.60	725.72		good	Lower section averaged 9° F warmer
Cave Run Lake	WC/BC	11/8	830	Trap Net	overcast	44.70	725.64		good	Lower section averaged 9° F warmer
Cave Run Lake	WC/BC	11/9	800	Trap Net	clear/cold	45.20	725.53		good	Lower section averaged 9° F warmer
Grayson Lake	LMB	4/18	2045	electro	clear/calm	62.70	640.45	-	good	cond: 179.6 µS/m; L secchi = 70", M secchi = 54"
Grayson Lake	LMB	9/25	1930	electro	clear/calm	64.30	645.38	-	good	cond: 144.56 µS/m
Grayson Lake	LMB	9/26	1930	electro	clear/calm		645.39	-	good	cond: 165.7 µS/m
Grayson Lake	LMB	9/27	1930	electro	clear/calm	71.30	645.9	-	good	cond: 157.0 µS/m
Grayson Lake	WC/BC	10/15	1000	electro	sunny/clear	59.50	645.09	26	good	no trail boat
Beech Fork	All	4/9	945	electro	sunny	59.80	normal	18	good	conductivity = 136.2; ph = 8.1
Lake Carnico	LMB	4/4	2045	electro	overcast/cool	61.30	normal	34	good	conductivity = 237.1; D.O. = 8.27, pH = 8.17
Lake Carnico	BG/RE	5/9	830	electro	overcast/cool	70.80	normal	36	good	conductivity = 237.1; D.O. = 7.82
Clear Creek	LMB	4/19	2130	electro	clear/calm	67.40	normal	60	good	
Clear Creek	BG/RE	5/10	915	electro	sunny/cool	68.60	normal	36	good	conductivity = 139.0; D.O. = 8.14
Greenbo Lake	LMB	4/16	2045	electro	clear/calm	59.80	down ~ 5"	162	good	
Greenbo Lake	BG/RE	5/7	930	electro	sunny/calm	72.00	normal	162	good	conductivity = 84.6; D.O. = 7.76
Greenbo Lake	LMB	9/24	930	electro	clear/cool	69.20	normal	240	good	conductivity = 72.3; D.O. = 7.98, diurnal sample for ≤ 9.0" LMB
Mill Creek Lake	LMB	4/19	2030	electro	sunny	64.00	normal	120	good	
Mill Creek Lake	BG/RE	5/17	940	electro	sunny/clear	65.90	normal	68	good	cond: 104.2 µS/m
Lake Reba	LMB	4/16	2030	electro	sunny/clear	64.10	normal	63	good	weeds very bad
Lake Reba	BG/RE	5/16	830	electro	sunny	69.90	normal	269	good	cond: 290.3 µS/m
Lake Reba	LMB	9/17	830	electro	overcast	73.10	normal	36	good	
Rebel Trace Lake	BG/RE	5/30	800	electro	sunny/clalm	65.20	normal	54	fair	conductivity = 75.6; D.O. = 4.53, aquatic vegetation problem
Smoky Valley	LMB	4/23	2030	electro	clear/calm	58.20	normal	29	good	cond: 306.0 µS/m
Smoky Valley	BG/RE	5/18	830	electro	cool/sunny	62.10	normal	-	good	cond: 274.8 µS/m
Lake Wilgreen	LMB	4/17	2030	electro	clear/sunny	62.20	normal	26	good	
Lake Wilgreen	BG/RE	5/15	830	electro	foggy/cool	66.00	normal	38	good	cond: 377.2 µS/m

Table 2. Relative abundance and CPUE (fish/hr) of muskellunge collected in the upper, middle and lower sections during 6 hours (18 hours total) of 30 minute runs in each area of Cave Run Lake (12,13,15 April 2012).

		Inch class																																						Std.
Species	Area	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	Total	CPUE	error
Muskellunge	Upper											1	1	3				2	3		1	1		1	2	1	3	2		1					1					23	3.83	0.58
	Middle		5	17	7	1				2	1	1		1	2		2	3	1	2	2	2	2	2	4	1	5		1			1						1		66	11.00	1.40
	Lower	1	7	19	4	1			1		2	1	2						1	2	1	7	4	5	8	4	2	3			3			1					1	80	13.33	2.34
	Total	1	12	36	11	2			1		2	4	3	5	1	2		4	7	3	4	10	6	8	12	9	6	10		2	3		1	1	1			1	1	169	9.39	1.13

nedmuscr.d12

Note: No muskellunge were stocked in the upper section during fall 2011.

Table 3. Number of fish and mean relative weight (W_r) values for length groups of muskellunge collected across all lake units in Cave Run Lake from 2003 to 2012. Standard errors are in parentheses.

	Length group												Total		
	≤ 20.0 in			20.1 - 30.0 in			30.1 - 38.0 in			≥ 38.1 in					
Year	N	W_r	(se)	N	W_r	(se)	N	W_r	(se)	N	W_r	(se)	N	W_r	(se)
2012	14	75	1	28	88	2	58	90	1	20	86	1	120	87	1
2011	23	83	2	29	93	1	40	91	1	27	88	2	119	89	1
2010	19	79	1	64	92	1	52	94	2	18	90	1	153	91	1
2009	12	88	4	11	97	1	36	93	1	23	93	1	82	93	1
2008	27	76	1	40	114	17	48	94	1	11	89	1	126	96	6
2007	35	84	1	9	102	4	18	95	3	14	92	2	76	90	1
2006	17	75	1	13	88	2	26	89	1	13	87	1	69	85	1
2005	26	81	4	23	91	1	38	89	1	22	85	2	109	87	1
2004	10	79	2	10	90	3	32	87	1	15	80	1	67	85	1
2003	22	82	3	16	96	3	33	92	2	9	87	2	80	90	1

nedmuscr.d12-d03

Table 4. Muskellunge assessment for Cave Run Lake spring electrofishing from 1995 to present.

Year		CPUE age 1	Spring CPUE ≥ 20.0 in	Spring CPUE ≥ 30.0 in	Spring CPUE ≥ 36.0 in	Spring CPUE ≥ 40.0 in	Total score	Assessment rating
2012	Value	3.45	5.89	4.33	1.94	0.56	16	Good
	Score	2	3	4	4	3		
2011	Value	1.89	5.33	3.72	2.17	0.89	15	Good
	Score	1	3	3	4	4		
2010	Value	6.78	7.44	3.89	1.94	0.56	16	Good
	Score	3	3	3	4	3		
2009	Value	2.56	3.89	3.28	1.67	0.67	15	Good
	Score	2	2	3	4	4		
2008	Value	2.67	5.50	3.28	1.28	0.28	14	Good
	Score	2	3	3	3	3		
2007	Value	3.61	2.50	1.78	1.17	0.39	12	Good
	Score	3	1	2	3	3		
2006	Value	2.44	2.89	2.17	1.22	0.44	11	Fair
	Score	2	1	2	3	3		
2005	Value	2.87	5.53	4.00	2.00	0.80	17	Excellent
	Score	2	3	4	4	4		
2004	Value	1.28	3.17	2.61	1.28	0.44	12	Good
	Score	1	2	3	3	3		
2003	Value	1.94	3.22	2.33	1.00	0.33	11	Fair
	Score	1	2	2	3	3		
2002	*Lake flooded, muddy water, too few muskellunge collected for comparison purposes*							
2001	Value	2.32	4.41	3.07	1.51	0.64	15	Good
	Score	2	2	3	4	4		
2000	Value	1.72	2.78	1.78	0.94	0.28	10	Fair
	Score	1	1	2	3	3		
1999	Value	1.64	3.15	2.30	0.67	0.24	9	Fair
	Score	1	2	2	2	2		
1998	Value	3.75	2.82	2.82	1.04	0.25	13	Good
	Score	3	3	2	3	2		
1997	*Lake flooded, muddy water, too few muskellunge collected for comparison purposes*							
1996	Value	5.23	4.16	2.36	0.83	0.42	12	Good
	Score	3	2	2	2	3		
1995	Value	2.87	4.52	2.83	1.56	0.55	14	Good
	Score	2	2	3	4	3		

nedmuscr.d11-09; nedMS2cr.d08; nedMK1cr.d07; nedmuscr.d06-95
Only fish captured are included in this table.

Table 5. Length frequency and CPUE (fish/hr) of black bass collected in 2.0 hours (6 hours total) of 30-minute nocturnal electrofishing runs in each area of Cave Run Lake from 03-05 April 2012.

		Inch class																							Std.
Area	Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	error
Upper	Smallmouth bass											1											1	0.50	0.50
	Spotted bass			1			1	1			2												5	2.50	1.26
	Largemouth bass			6	17	11	10	5	66	64	25	17	15	26	16	20	11	7	7	7	2	1	333	166.50	9.11
Middle	Smallmouth bass				2						2	1	1										6	3.00	0.58
	Spotted bass			13	28	10	5	28	51	25	20	10	3										193	96.50	5.12
	Largemouth bass	1		2	17	36	37	4	18	78	60	42	21	8	6	4	9	5	3	1	3		355	177.55	13.38
Lower	Smallmouth bass			2	1			2	1				1	1	2	2			1	1			14	7.00	2.08
	Spotted bass		3	42	20	3	35	123	85	57	29	19	6	4	1								427	213.50	38.61
	Largemouth bass			6	29	42	46	7	6	72	47	33	25	21	15	13	6	5	3	1	2		379	189.50	30.26
Total	Smallmouth bass			2	3			2	1		2	2	2	1	2	2			1	1			21	3.50	1.05
	Spotted bass		3	56	48	13	41	152	136	82	51	29	9	4	1								625	104.17	28.55
	Largemouth bass	1		14	63	89	93	16	90	214	132	92	61	55	37	37	26	17	13	9	7	1	1067	177.83	10.73

nedpsdcr.d12

Table 6. Spring 2012 electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Cave Run Lake from 1998-2012.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		Total		Sections	TTL
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	Sampled*	hours
2012	46.00	6.71	88.00	4.92	25.50	3.64	18.33	2.35	177.83	10.73	L,M,U	6
2011												
2010	No data collected - high water											
2009												
2008	25.83	6.16	23.33	2.59	8.33	1.28	3.50	0.96	61.00	8.47	L,M,U	6
2007	67.50	7.21	43.33	3.50	19.92	2.84	7.92	1.33	138.67	10.74	L,M,U	12
2006	50.67	10.14	48.50	7.70	14.67	1.99	10.17	1.42	124.00	19.07	L,M,U	6
2005	75.00	13.08	41.67	6.41	14.67	2.67	7.17	1.64	138.50	22.18	L,M,U	6
2004	29.00	3.02	60.67	5.88	26.00	3.03	14.08	1.35	129.75	10.14	L,M,U	12
2003	41.00	5.99	64.58	5.15	24.75	2.28	20.25	2.85	150.58	13.02	L,M,U	12
2002	No data collected - high water											
2001	22.83	3.68	54.67	5.41	27.58	2.33	12.58	1.55	117.67	8.60	L,M,U	12
2000	45.08	4.88	78.33	6.48	26.83	2.89	9.00	1.51	159.25	10.69	L,M,U	12
1999	67.58	7.18	51.25	3.47	21.58	1.79	8.58	1.49	149.00	8.73	L,M,U	12
1998	18.71	3.52	17.86	2.94	20.57	2.14	6.86	1.54	64.00	7.64	L,M	7

nedpsdcr.d12, d08 - d03, d01 - d98

* L - lower, M - middle, U - upper

Table 7. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples in each area of Cave Run Lake; 95% confidence intervals are in parentheses.

Area	Species	No. ≥ 8.0 in	PSD	RSDa
Lower	Smalllmouth bass	11	73 (± 28)	55 (± 31)
	Spotted bass	324	9(± 3)	
	Largemouth bass	249	37 (± 6)	12 (± 4)
Middle	Spotted bass	137	10 (± 5)	
	Largemouth bass	258	23 (± 5)	10 (± 4)
Upper	Largemouth bass	284	39 (± 6)	19 (± 5)
Total	Smallmouth bass	16	69 (± 23)	38(± 25)
	Spotted bass	464	9 (± 3)	
	Largemouth bass	791	33 (± 3)	14 (± 2)

[a] Largemouth bass = RSD_{15}, spotted and smallmouth bass = RSD_{14}

nedpsdcr.d12

Table 8. Mean back-calculated lengths (in) at each annulus for largemouth bass collected from Cave Run Lake from 03-05 April 2012, including the range of length of bass at each age and the 95% confidence intervals for each age class.

		Age					
Year	No.	1	2	3	4	5	6
2011	34	5.7					
2010	15	5.7	9.3				
2009	19	6.0	9.7	11.9			
2008	8	6.4	10.6	12.8	14.3		
2007	3	5.9	10.1	12.3	13.9	15.2	
2006	9	6.6	10.2	12.4	13.9	15.2	16.3
Mean		5.9	9.8	12.2	14.1	15.2	16.3
Number		88	54	39	20	12	9
Smallest		3.1	7.4	10.0	11.9	12.6	13.3
Largest		8.1	12.3	14.9	16.6	17.3	18.5
Std error		0.1	0.1	0.2	0.3	0.4	0.7
95% CI (+)		0.3	0.3	0.3	0.5	0.9	1.3

Otoliths were used for age-determinations; Intercept=0

nedaagcr.d12

Table 9. Age frequency and CPUE (fish/hr) of largemouth bass collected in 6.0 hours of nocturnal electrofishing at Cave Run Lake during 03-05 April 2012.

	Inch class																			Std
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total	%	CPUE	error
1	14	63	89	93	13												272	26	45.30	6.67
2					3	90	214	53	20								380	36	63.41	4.29
3								79	72	61	18						230	22	38.35	3.86
4											24	25	12	9			70	7	11.69	1.93
5												12	12	9			33	3	5.56	0.89
6											12		12	9	17	13	63	6	10.54	1.28
Total	14	63	89	93	16	90	214	132	92	61	55	37	37	26	17	13	1049	100		
%	1	6	8	9	2	9	20	13	9	6	5	4	4	2	2	1	100			

nedaagcr.d12, nedpsdcr.d12

Table 10. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected during spring sampling at Cave Run Lake from 1999 - 2008, 2012.

	Year									
Age	1999	2000	2001	2003	2004	2005	2006	2007	2008	2012
1	61.64	42.44	20.65	39.76	28.09	63.36	49.21	66.52	24.88	45.30
2	43.46	61.41	47.10	55.77	46.55	42.80	42.04	36.27	20.06	63.41
3	27.09	34.71	26.53	24.17	31.96	19.99	16.37	23.32	8.33	38.35
4	11.20	14.46	15.35	17.34	14.19	7.58	9.57	4.06	2.53	11.69
5	3.69	3.76	5.03	7.19	5.30	2.37	3.50	2.80	2.10	5.56
6	1.17	1.10	1.58	3.27	2.06	0.86	1.69	2.46	0.88	10.54
7	0.13	0.15	0.18	0.50	0.28	0.13	0.27	1.10	0.33	
8	0.53	0.47	0.71	1.50	0.86	0.52	0.96	1.11	0.53	
10	0.08	0.08	0.28	0.33	0.14	0.22	0.22	0.53	0.36	
13		0.33	0.17	0.75	0.08	0.33	0.17			

Note: Did not sample in 2002 due to high water, reduction in 2008 CPUE may be attributed a malfunctioning electrofishing boat.

nedpsdcr.d12,d08 - d03, d01 - d99

nedaagcr.d12, d07, d

Table 11. Population assessment of largemouth bass based on samples collected at Cave Run Lake since the implementation of the slot limit (scoring based on statewide assessment).

Year		Mean Length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0 - 14.9 in	Spring CPUE ≥ 15.0 in	Spring CPUE ≥ 20.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2012	Value	11.8	45.30	25.50	18.33	1.33	14	Good	0.852	57.30%
	Score	3	3	3	3	2				
2011*										
2010*										
2009*										
2008	Value	12.4	24.88	8.33	3.50	0.50	9	Fair	0.786	54.40%
	Score	3	2	1	1	2				
2007	Value	12.4	66.50	19.90	7.90	0.33	13	Good	0.703	51.00%
	Score	3	4	2	2	2				
2006	Value	12.4	49.20	14.70	10.20	0.17	10	Fair	0.799	55.00%
	Score	3	3	1	2	1				
2005	Value	12.4	43.00	14.70	7.25	0.67	11	Fair	0.897	59.00%
	Score	3	3	1	2	2				
2004	Value	12.4	28..1	26.00	14.70	0.33	13	Good	0.846	57.00%
	Score	3	2	3	3	2				
2003	Value	12.4	39.80	24.80	20.20	0.75	14	Good		
	Score	3	3	2	4	2				
2002*										
2001	Value	10.7	15.10	27.60	12.60	0.25	10	Fair		
	Score	1	1	3	3	2				
2000	Value	10.3	35.50	26.80	9.00	0.42	10	Fair		
	Score	1	2	3	2	2				
1999	Value	11.0	50.20	21.60	8.60	0.00	9	Fair		
	Score	1	4	2	2	0				
1998	Value	10.7	10.80	20.60	6.90	0.00	6	p		
	Score	1	1	2	2	0				
1997	Value	10.8	23.80	24.60	4.40	0.08	7	Fair		
	Score	1	1	2	2	1				
1996	Value	11.1	50.80	15.20	4.00	0.00	9	Fair		
	Score	2	4	2	1	0				

* = Lake w as not sampled due to high w ater

Table 12. Population assessment of largemouth bass based on scoring parameters applicable to the 13.0-16.0-inch slot limit at Cave Run Lake.

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 11.0 - 12.9 in	Spring CPUE 13.0- 15.9 in	Spring CPUE ≥ 16.0 in	Total score	Assessment rating
2012	Value	11.8	45.30	25.50	21.50	12.17	16	Good
	Score	3	3	2	4	4		
2011*	Value							
	Score							
2010*	Value							
	Score							
2009*	Value							
	Score							
2008	Value	12.4	24.88	8.50	6.00	2.17	8	Fair
	Score	4	1	1	1	1		
2007	Value	12.4	66.50	23.90	9.80	5.80	14	Good
	Score	4	4	2	1	3		
2006	Value	12.4	49.20	13.80	11.20	6.80	12	Good
	Score	4	3	1	1	3		
2005	Value	12.4	43.00	18.30	10.50	3.80	11	Fair
	Score	4	3	1	1	2		
2004	Value	12.4	28.10	32.20	16.50	8.90	15	Good
	Score	4	2	3	2	4		

Malfunctioning electrofishing boat in 2008

* No samples during 2009-2011 due to high water

Table 13. Length frequency and CPUE (fish/hr) of largemouth bass ≤ 9.9 in collected in 6.0 hours (2 hours in each area; 12- 30-min. runs) of nocturnal electrofishing in Cave Run Lake on 18-20 September 2012.

Area/Species	Inch class 2	3	4	5	6	7	8	9	Total	CPUE	Std. error
Lower											
Largemouth bass	2	18	16	14	6	3	10	3	72	36.00	2.16
Middle											
Largemouth bass	2	8	20	13	10	6	4	7	70	35.00	7.00
Upper											
Largemouth bass	33	180	139	100	36	10	24	35	557	278.50	60.15
Total											
Largemouth bass	37	206	175	127	52	19	38	45	699	116.50	39.07

nedwrscr.d12

This sample was for the Largemouth Bass Stocking Initiative Program purposes only.

Table 14. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall while nocturnal electrofishing at Cave Run Lake.

		Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
Year class	Area	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2012	Total	4.4	0.04	100.67	35.63	31.00	9.23		
2011	Total	4.0	0.04	85.00	20.57	15.33	2.43	45.30	6.67
2010	Total	4.5	0.04	91.67	27.71	24.67	4.22		
2009	Total	4.6	0.04	70.17	12.16	26.33	4.10	*	*
2008	Total	4.6	0.04	76.50	28.15	26.33	8.13	*	*
2007	Total	4.7	0.06	50.50	19.00	20.30	7.70	24.88	5.86
2006	Total	4.8	0.05	68.50	26.20	31.50	13.10	66.50	7.10
2005	Total	4.1	0.07	51.50	19.40	10.80	3.50	49.20	9.90
2004	Total	5.3	0.06	86.00	26.30	53.50	14.00	63.40	9.90
2003	Total	4.7	0.04	70.70	19.00	23.50	6.40	28.10	3.00

* No data collected, water too high to sample
nedwrscr.d12 - 03; nedpsdcr.d12 - d04
nedaagcr.d03, 07

Table 15. Length frequency and CPUE (fish/hr) of crappie collected in 1.0 hour (3.0 hours total) of 15-minute diurnal electrofishing runs in each area of Cave Run Lake from 19-20 March 2012.

		Inch class														Std.
Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	Total	CPUE	error
Upper	White crappie	6	2	115	49	42	30	12	2	5	2	1		266	266.00	27.54
	Black crappie	2	2	6	8	15	5	1		1				40	40.00	10.20
Middle	White crappie				1	1	3	1	1					7	7.00	2.52
	Black crappie					2	5	1	1					9	9.00	5.26
Lower	White crappie												1	1	1.00	1.00
	Black crappie						6	2	1	2	2			13	13.00	9.43
Total	White crappie	6	2	115	50	43	33	13	3	5	2	1	1	274	91.33	37.17
	Black crappie	2	2	6	8	17	16	4	2	3	2			62	20.67	6.11

nedcefcr.d12

Table 16. Length frequency and CPUE (fish/nn) for each species of crappie collected while trap netting in the upper and lower sections at Cave Run Lake in 60 net-nights during 05 - 09 November 2012.

		Inch class													
Area	Species	2	3	4	5	6	7	8	9	10	11	12	Total	CPUE	Std. error
Upper	White crappie	17	149	20	62	127	111	17	12	3	2	2	522	16.31	3.13
	Black crappie			8	10	7	10	2	1				38	1.19	0.51
Lower	White crappie		1				2	1	5	1		1	11	0.39	0.14
	Black crappie		2	1		1	1	1	2	1	1	1	11	0.39	0.14
Total	White crappie	17	150	20	62	127	113	18	17	4	2	3	533	8.88	1.95
	Black crappie		2	9	10	8	11	3	3	1	1	1	49	0.82	0.28

nedctncr.d12

Table 17. PSD and RSD_{10} values for crappie collected in trap nets on Cave Run Lake; 95% confidence limits are in parentheses.

	No. >5.0 in	PSD	RSD_{10}
White crappie	346	13 (±4)	3 (± 2)
Black crappie	38	24 (± 14)	8 (± 8)

nedctncr.d12

Table 18. Mean back-calculated lengths (in) at each annulus for white crappie collected from Cave Run Lake during 05-09 November 2012, including the range of length of white crappie at each age and the 95% confidence intervals for each age class.

		Age				
Year	No.	1	2	3	4	5
2011	16	3.7				
2010	33	4.1	6.3			
2009	13	4.0	6.7	8.3	10.0	
2008	6	4.4	6.3	8.2	9.7	
2007	1	4.7	7.2	8.9	10.9	12.0
Mean		4.0	6.4	8.3	9.9	12.0
Number		70	54	20	7	1
Smallest		3.2	5.0	6.9	8.2	12.0
Largest		5.3	8.6	10.2	11.8	12.0
Std error		0.1	0.1	0.2	0.4	
95% CI (+)		0.1	0.2	0.4	0.8	

Otoliths were used for age-determinations; Intercept=0
nedaagcr.d12

Table 19. Mean back-calculated lengths (in) at each annulus for black crappie collected from Cave Run Lake during 05-09 November 2012, including the range of length of black crappie at each age and the 95% confidence intervals for each age class.

		Age				
Year	No.	1	2	3	4	5
2011	17	3.6				
2010	10	4.0	6.3			
2009	8	3.5	5.8	7.1		
2008	4	3.9	5.8	7.4	8.5	
2007	1	4.3	6.7	9.6	11.3	12.1
Mean		3.7	6.0	7.4	9.1	12.1
Number		40	23	13	5	1
Smallest		3.2	4.7	6.3	7.9	12.1
Largest		6.0	9.8	9.6	11.3	12.1
Std error		0.1	0.2	0.2	0.6	
95% CI (+)		0.1	0.4	0.4	1.1	

Otoliths were used for age-determinations; Intercept=0
nedaagcr.d12

Table 20. Age frequency and CPUE of white crappie collected from trap nets fished in Cave Run Lake during 05-09 November 2012.

	Inch class												Std
Age	3	4	5	6	7	8	9	10	11	12	Total	%	CPUE	error
0+	150	16									166	32	2.76	0.76
1+		4	62	58	9						133	26	2.23	0.56
2+				69	104	13	7	1			194	38	3.23	0.68
3+						4	9	1	1	1	16	3	0.26	0.05
4+						1	1	2	1	1	6	1	0.11	0.03
5+										1	1	0	0.02	0.01
Total	150	20	62	127	113	18	17	4	2	3	516	100		
%	29	4	12	25	22	3	3	1	0	1	100			

nedctncr.d12, nedaagcr.d12

Table 21. Age frequency and CPUE (fish/nn) of black crappie collected from trap nets fished in Cave Run Lake during 05-09 November 2012.

	Inch class												Std
Age	3	4	5	6	7	8	9	10	11	12	Total	%	CPUE	error
0+	2	2									4	8	0.06	0.03
1+		7	8	3	1						20	41	0.33	0.13
2+			2	5	4	1	1		1		13	27	0.22	0.10
3+					6	1	1				8	17	0.14	0.05
4+						1	1	1			3	7	0.05	0.02
5+										1	1	2	0.02	0.02
Total	2	9	10	8	11	3	3	1	1	1	49	100		
%	4	18	20	16	22	6	6	2	2	2	100			

nedctncr.d12, nedaagcr.d12

Table 22. Population assessment of white crappie based on samples collected at Cave Run Lake in 2012 compared to previous years (scoring based on statewide assessment).

Year		Overall CPUE excluding age-0	CPUE age-1	CPUE age-0	Fall CPUE ≥ 8.0 in	Mean length age-2 at capture	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2012	Value	5.83	2.23	2.76	0.73	7.9	6	Poor	-1.179	69.20%
	Score	2	1	1	1	1				
2011	Value	21.40	11.60	17.30	3.38	7.7	12	Good		
	Score	4	2	4	2	1				
2010	Value	3.60	0.88	2.53	1.38	7.7	5	Poor	-1.220	70.50%
	Score	1	1	1	1	1				
2009	Value	106.4	59.18	56.00	3.25	7.7	15	Good	-1.490	77.50%
	Score	4	4	4	2	1				
2008	Value	2.01	0.64	1.30	0.56	7.7	5	Poor	0.588	45.50%
	Score	1	1	1	1	1				
2007	Value	2.80	0.74	0.55	0.60	7.7	5	Poor	1.410	75.50%
	Score	1	1	1	1	1				
2006	Value	6.89	5.14	3.75	0.65	7.9	8	Fair	0.951	66.30%
	Score	2	2	2	1	1				
2005	Value	2.20	0.70	1.70	0.90	7.9	5	Poor	0.572	43.60%
	Score	1	1	1	1	1				
2004	Value	9.30	4.20	6.40	3.00	7.9	10	Fair	0.762	53.30%
	Score	2	2	3	2	1				
2003	Value	1.60	0.22	0.11	0.70	7.8	5	Poor	0.391	32.30%
	Score	1	1	1	1	1				
2002	Value	4.39	1.09	0.56	0.79	7.3	5	Poor		
	Score	1	1	1	1	1				
2001	Value	1.70	0.60	0.05	0.35	6.9	5	Poor		
	Score	1	1	1	1	1				

nedctncr.d01-12; nedaagcr.d01-04,07,12

Table 23. Length frequency and CPUE (fish/hr) of black bass collected in 4.0 hours (2.0 hours in middle and lower areas) of nocturnal electrofishing (4- 30-minute runs) for black bass in Grayson Lake on 18 April 2012.

	Inch class																			Std.
Area/Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE	error
Lower																					
Smallmouth bass											1								1	0.50	0.50
Spotted bass	9	13	16	31	34	21	26	11	4	4	1	1							171	85.50	9.00
Largemouth bass	1	18	25	9	39	65	51	40	19	14	5	6	5	8	8	3	4		320	160.00	11.40
Middle																					
Spotted bass	5	5	1	9	11	11	5	7	3	1									58	29.00	6.24
Largemouth bass	9	57	59	21	30	80	49	44	16	22	10	10	7	6	3	6	2	1	432	216.00	23.55
Total																					
Smallmouth bass											1								1	0.25	0.25
Spotted bass	14	18	17	40	45	32	31	18	7	5	1	1							229	57.25	11.82
Largemouth bass	10	75	84	30	69	145	100	84	35	36	15	16	12	14	11	9	6	1	752	188.00	16.08

nedpsdgl.d12

Table 24. Length frequency and CPUE (fish/hr) of stocked* and wild largemouth bass collected in 4.0 hours of nocturnal electrofishing at Grayson Lake.

	Inch class																			Std.
Type	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE	error
Wild	10	75	84	30	69	145	94	73	33	33	15	16	12	14	11	9	6	1	730	182.50	15.49
Stocked							6	11	2	3									22	5.50	1.59

nedstkgl.d12; nedwldgl.d12

*Stocked in 2010 as part of the LMB stocking initative

Table 25. Spring electrofishing CPUE (fish/hr) for various length groups of largemouth bass collected at Grayson Lake from 1990-2012.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
2012	67.00	11.36	91.00	6.50	16.75	2.23	13.25	2.75	0.25	0.25	188.00	16.08
2011*												
2010*												
2009	22.83	4.03	41.00	4.22	17.00	2.68	12.67	2.04	0.83	0.30	93.50	10.25
2008	25.67	7.21	22.50	4.35	11.50	2.48	3.67	0.85	0.33	0.22	63.33	11.51
2007	48.00	8.03	46.83	3.75	16.00	2.09	5.00	0.76	0.17	0.17	115.83	11.64
2006	18.83	2.88	55.50	7.40	23.67	3.91	5.33	1.11	0.33	0.22	10.33	10.07
2005	50.11	7.95	70.22	7.35	25.11	3.66	2.89	0.52	0.22	0.15	148.33	15.86
2004	162.33	21.99	77.78	10.10	12.89	1.38	2.89	0.59	0.33	0.18	255.89	31.87
2003	128.33	10.65	79.50	6.51	6.33	0.77	2.17	0.63	0.67	0.38	216.33	15.11
2002	132.50	17.87	54.50	5.48	4.83	1.42	3.00	0.76	0.83	0.39	194.83	22.74
2001	220.78	30.58	54.22	3.23	6.67	0.89	2.22	0.48	0.22	0.15	283.89	30.19
2000	143.33	20.56	65.67	5.86	13.44	1.51	6.67	1.04	0.33	0.18	229.11	25.92
1999	172.67	21.58	102.44	10.12	24.11	2.13	4.56	0.66	0.22	0.15	303.78	31.25
1998	146.67	22.15	90.50	8.31	20.00	2.19	4.67	0.75	0.17	0.17	261.83	25.45
1997	90.00	10.84	70.22	6.11	19.93	1.85	3.26	0.71	0.59	0.21	183.41	15.51
1996	57.63	7.89	68.07	5.09	13.11	1.54	3.17	0.51	0.30	0.14	142.00	11.80
1995	20.44	2.30	57.56	4.72	17.70	1.07	4.59	0.64	0.30	0.14	100.30	6.87
1994	109.41	15.01	72.74	4.02	20.07	1.63	4.67	0.73	0.22	0.12	206.89	17.46
1993	36.96	4.86	86.37	5.96	17.04	1.20	5.63	0.52	0.37	0.19	146.00	9.94
1992	37.04	3.83	54.80	5.24	13.12	1.42	4.96	0.68	0.16	0.11	119.48	6.81
1991	21.00	3.21	37.33	4.52	19.00	2.29	4.67	1.61			82.00	7.10
1990	27.33	4.58	55.17	5.56	23.00	2.07	5.33	0.79	0.17	0.17	110.83	6.99

* = Lake not sampled due to high water

nedpsdgl.d90 - d12

Table 26. Black bass PSD and RSD_a values from spring electrofishing at Grayson Lake; 95% confidence limits are in parentheses.

Area/Species	No. ≥8.0 in	PSD	RSD_a
Lower Lake			
Largemouth bass	228	23 (±6)	12 (±4)
Spotted bass	102	10 (±6)	1 (±2)
Smallmouth bass	1	- -	- -
Middle Lake			
Largemouth bass	256	26 (±5)	10 (±4)
Spotted bass	38	11 (±10)	- -
Smallmouth bass	0		-
Total			
Largemouth bass	484	25 (±4)	11 (±3)
Spotted bass	140	10 (±5)	1 (±1)
Smallmouth bass	1	- -	- -

[a] Largemouth bass RSD_{15}; spotted and smallmouth bass RSD_{14}

- Not enough (or no fish) were collected to be able to determine values.

nedpsdgl.d12

Table 27. Population assessment of largemouth bass based on samples collected at Grayson Lake from 1996-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2012	Value	11.6	48.50	16.75	13.25	0.25	12	Good		
	Score	2	3	2	3	2				
2011										
2010										
2009	Value	11.6	19.93	17.00	12.67	0.83	10	Fair	-0.361	30.30%
	Score	2	1	2	3	2				
2008	Value	11.6	21.30	11.50	3.67	0.33	7	Poor	-0.445	35.90%
	Score	2	1	1	1	2				
2007	Value	10.7	45.90	16.00	5.00	0.17	9	Fair	-0.538	41.60%
	Score	1	3	2	2	1				
2006	Value	10.7	17.30	23.67	5.33	0.30	8	Fair	-5.350	41.50%
	Score	1	1	2	2	2				
2005	Value	10.7	46.80	25.11	2.89	0.20	10	Fair	-0.731	51.90%
	Score	1	3	3	1	2				
2004	Value	10.7	40.40	12.89	2.89	0.33	8	Fair		
	Score	1	3	1	1	2				
2003	Value	10.7	125.23	6.33	2.17	0.67	9	Fair		
	Score	1	4	1	1	2				
2002	Value	10.7	127.20	4.83	3.00	0.83	9	Fair		
	Score	1	4	1	1	2				
2001	Value	10.7	218.11	6.67	2.22	0.22	9	Fair		
	Score	1	4	1	1	2				
2000	Value	10.5	130.80	13.44	6.67	0.33	10	Fair		
	Score	1	4	1	2	2				
1999	Value	10.7	167.02	24.11	4.56	0.22	11	Fair		
	Score	1	4	2	2	2				
1998	Value	10.4	145.57	20.20	4.62	0.17	10	Fair		
	Score	1	4	2	2	1				
1997	Value	10.8	87.60	19.90	3.10	0.59	10	Fair		
	Score	1	4	2	1	2				
1996	Value	10.7	56.13	13.20	3.20	0.30	9	Fair		
	Score	1	4	1	1	2				

nedpsdgl.d96-d12; nedaaggl.d03,d08

Table 28. Length frequency and CPUE (fish/hr) of black bass collected in 4.5 hours (1.5 hours in each area) of nocturnal electrofishing (9- 30-minute runs) for black bass in Grayson Lake on 25 - 27 September 2012.

	Inch class																				Std.
Area/Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE	error
Lower																						
Smallmouth bass		2	5	5																12	8.00	8.00
Spotted bass		30	52	6	17	24	23	21	5	1	2									181	120.67	33.65
Largemouth bass		39	79	38	19	1	16	21	34	8	5	2	2	1			1	1		267	178.00	17.78
Middle																						
Spotted bass	1	31	97	15	4	7	9	14	4	2										184	122.67	21.36
Largemouth bass	6	108	118	63	15	3	31	44	35	10	7	1	5	1		1			1	449	299.33	57.67
Upper																						
Spotted bass		4	2			2	1	1		1										11	7.33	1.76
Largemouth bass	3	49	36	39	13	3	39	23	29	13	8	5	2	2	1			1		266	177.33	37.88
Total																						
Smallmouth bass		2	5	5																12	2.67	2.67
Spotted bass	1	65	151	21	21	33	33	36	9	4	2									376	83.56	22.27
Largemouth bass	9	196	233	140	47	7	86	88	98	31	20	8	9	4	1	1	1	2	1	982	218.22	28.93

nedwrsgl.d12

Table 29. Number of fish and mean relative weight (W_r) values for length groups of black bass collected in Grayson Lake. Standard errors are in parentheses.

		Length group								
Species	Area	8.0-11.9 in			12.0-14.9 in			≥ 15.0 in		
		No.	W_r	(se)	No.	W_r	(se)	No.	W_r	(se)
Largemouth bass	Lower	78	81	(1)	9	78	(4)	3	95	(1)
	Middle	120	82	(1)	13	81	(2)	3	96	(8)
	Upper	102	86	(1)	15	93	(3)	4	108	(4)
	Total	300	83	(0)	37	86	(2)	10	100	(3)

		7.0-10.9 in			11.0-13.9 in		
		No.	W_r	(se)	No.	W_r	(se)
Spotted bass	Lower	46	92	(1)	3	77	(12)
	Middle	28	92	(1)	2	92	(1)
	Upper	3	93	(2)	1	102	(-)
	Total	77	92	(1)	6	86	(7)

nedwrsgl.d12

Table 30. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in September while nocturnal electrofishing at Grayson Lake.

		Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
Year class	Area	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2012	Total	4.5	0.04	139.11	23.00	41.78	6.06		
2011	Total	4.0	0.04	83.56	15.03	11.11	2.58	48.50	11.97
2010	Total	4.8	0.04	98.22	17.32	42.00	6.91	*	*
2009	Total	4.1	0.06	33.11	5.66	4.22	1.35	*	*
2008	Total	4.1	0.04	66.00	16.42	8.67	2.77	19.93	3.79
2007	Total	4.3	0.07	44.90	9.20	12.90	2.80	29.80	9.99
2006	Total	4.1	0.04	87.10	17.94	12.00	2.58	45.90	8.00
2005	Total	4.0	0.04	72.30	17.01	11.70	2.23	17.30	2.80
2004	Total	4.3	0.08	40.40	5.74	11.30	2.08	46.80	7.80
2003	Total	4.3	0.03	59.10	6.82	10.40	1.72	158.90	21.73

* No sample collected due to high water
nedwrsgl.d12 - d03; nedpsdgl.d12, d09 - d04
nedaaggl.d03, d08

Table 31. Length frequency and CPUE (fish/hr) for each species of crappie collected at Grayson Lake while electrofishing 1.50h (6- 15-minute runs) 15 October 2012.

	Inch class													
Species	3	4	5	6	7	8	9	10	11	12	13	Total	CPUE	Std. error
White crappie	3	1	18	85	60	29	4		3	4	1	208	138.67	52.57
Black crappie				3	1	3	1	1				9	6.00	4.47

nedcwrgl.d12

Table 32. PSD and RSD_{10} values for crappie collected while electrofishing Grayson Lake; 95% confidence limits are in parentheses.

	No.≥5.0 in	PSD	RSD_{10}
White crappie	215	20 (±6)	4 (±3)
Black crappie	9	56 (±34)	11 (±22)

nedcwrgl.d12

Table 33. Population assessment for white crappie based on samples collected during the fall at Grayson Lake from 2005-2012 (scoring based on lake-specific assessment).

Year		Mean length age-2 at capture	CPUE age-0	CPUE age-1	CPUE ≥age -1	CPUE ≥8.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2012	Value	6.6	2.00	11.47	125.20	27.33	12	Good		
	Score	1	1	2	4	4				
2011	Value	6.6	0.00	0.33	44.00	13.38	6	Poor	-4.442	35.70%
	Score	1	0	1	2	2				
2010	Value	6.6	0.67	13.50	124.00	24.67	12	Good	-0.425	34.60%
	Score	1	1	3	4	3				
2009	Value	6.4	0.50	16.80	69.30	10.30	10	Fair	-0.384	56.60%
	Score	1	1	3	3	2				
2008	Value	6.4	1.70	27.60	104.60	16.00	12	Fair	-0.754	53.00%
	Score	1	1	4	4	2				
2007	Value	5.6	0.30	1.30	21.60	6.00	5	Poor	-0.900	59.30%
	Score	1	1	1	1	1				
2006	Value	5.6	39.60	83.30	228.80	42.40	17	Excellent	-1.185	69.40%
	Score	1	4	4	4	4				
2005	Value	5.1	1.30	9.90	41.30	16.70	8	Fair	-0.233	20.80%
	Score	1	1	2	2	2				

nedcwrgld12-d05; nedaaggl.d05, d06, d08, d10

Table 34. Length frequency and CPUE (fish/hr) for largemouth bass collected in 1.5 hours of nocturnal electrofishing (6- 15-minute runs) at Lake Carnico (Nicholas Co.) on 04 April 2012.

	Inch class																			Std.
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE	error
Largemouth bass	2	32	22	10	12	31	18	6	12	13	12	10	8	9	2		3	202	134.67	15.85

nedpsdlc.d12

Table 35. Spring electrofishing CPUE (fish/hr) for various length groups of largemouth bass collected at Lake Carnico from 2000 to 2012.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
2012	52.00	7.93	44.67	10.80	23.33	3.33	14.67	2.46			134.67	15.85
2011	22.00	3.69	24.00	5.84	24.00	2.31	9.33	1.98			79.33	8.85
2010	20.00	5.93	26.67	3.96	28.00	4.73	12.00	3.43	1.33	0.84	86.67	9.16
2009	38.67	6.98	29.33	5.23	18.67	2.86	8.67	1.61	1.33	0.84	95.33	10.75
2008	2.67	0.84	16.00	4.50	9.33	2.46	8.00	2.07	1.33	0.84	36.00	7.30
2007	40.00	8.07	108.67	8.97	31.33	3.92	14.67	2.46	1.33	1.33	194.67	10.26
2006	28.67	5.10	41.33	8.56	18.00	3.69	9.33	2.86	0.67	0.67	97.33	18.12
2005	24.00	5.56	64.67	8.48	24.67	3.33	14.00	1.71	0.67	0.67	127.33	12.62
2004	56.67	13.36	121.33	15.62	36.00	5.16	19.33	3.00	0.67	0.67	233.33	34.71
2003	42.67	9.50	47.67	6.25	34.00	4.70	13.33	4.09	1.33	0.84	164.67	15.78
2002	49.00	9.43	51.00	17.08	30.00	7.75	9.00	1.91		-	139.00	29.59
2001	35.00	5.00	51.00	8.54	28.00	5.89	6.00	2.58		-	123.00	11.31
2000	28.00	6.32	41.00	3.00	16.00	5.66	9.00	3.00	1.00	1.00	94.00	15.87

nedpsdlc.d12 - d00

Table 36. Largemouth bass PSD and RSD_{15} values from spring electrofishing at Lake Carnico; 95% confidence limits are in parentheses.

Year	No. ≥8.0 in	PSD	RSD_{15}
2012	124	46 (± 9)	18 (± 7)
2011	86	58 (± 10)	16 (± 8)
2010	100	60 (± 19)	18 (± 15)
2009	85	48 (± 11)	15 (± 8)
2008	50	52 (± 14)	24 (± 12)
2007	232	30 (± 6)	10 (± 4)
2006	103	40 (± 10)	14 (± 7)
2005	155	37 (± 8)	14 (± 6)
2004	265	31 (± 6)	11 (± 4)
2003	183	39 (± 7)	11 (± 5)
2002	90	43 (± 10)	10 (± 6)
2001	85	40 (± 11)	7 (± 6)
2000	66	38 (± 12)	14 (± 8)

nedpsdlc.d12-d00

Table 37. Population assessment of largemouth bass based on samples collected at Lake Carnico from 2004-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2012	Value	11.0	16.00	23.33	14.67	0.00	9	Fair	-0.504	39.60%
	Score	3	2	2	2	0				
2011	Value	11.0	9.33	24.00	9.33	0.00	8	Fair	-0.419	34.20%
	Score	3	1	2	2	0				
2010	Value	11	18.67	28.00	12.00	1.33	11	Fair	-0.552	42.50%
	Score	3	2	2	2	2				
2009	Value	11.0	18.00	18.67	8.67	1.33	10	Fair	-0.599	45.10%
	Score	3	2	1	2	2				
2008	Value	11.0	2.70	9.30	8.00	1.30	9	Fair	-0.673	49.00%
	Score	3	1	1	2	2				
2007	Value	12.2	39.50	31.30	14.70	1.30	12	Fair	-0.679	49.30%
	Score	4	2	2	2	2				
2006	Value	12.2	27.50	18.00	9.30	0.70	10	Fair	-0.505	39.60%
	Score	4	2	1	2	1				
2005	Value	12.2	23.20	24.70	14.00	0.70	11	Fair	-0.511	40.00%
	Score	4	2	2	2	1				
2004	Value	12.2	54.10	36.00	19.30	0.70	14	Good	-0.631	46.90%
	Score	4	3	3	3	1				

nedpsdlc.d04-d12; nedaaglc.d03,d08

Table 38. Length frequency and CPUE (fish/hr) for sunfish collected in 1.0 hour of diurnal electrofishing (8- 7.5-minute runs) at Lake Carnico on 09 May 2012.

Species	Inch class					Total	CPUE	Std. error
	3	4	5	6	7			
Bluegill	34	23	17	7	1	82	82.00	12.63
Green sunfish	97	56	37	6		196	196.00	60.83
Longear sunfish	76	67	1			144	144.00	34.11
Redear sunfish		2	3	7		12	12.00	6.41
Hybrid sunfish	1					1	1.00	1.00

nedsunlc.d12

Table 39. Spring electrofishing CPUE (fish/hr) for various length groups of sunfish collected at Lake Carnico in 2003, 2006-2012.

		Length group									
		<3.0 in		3.0-5.9 in		6.0-7.9 in		≥8.0 in		Total	
Species	Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
Bluegill	2012	*	*	74.00	11.88	8.00	2.14			82.00	12.63
	2011	338.00	49.52	177.00	37.87	4.00	4.00			519.00	35.60
	2010	446.00	71.37	520.00	65.40	60.00	26.14			1026.00	121.90
	2009	214.00	42.60	109.00	23.20	59.00	20.90			382.00	79.90
	2008	292.00	42.06	58.00	14.90	7.00	2.80			357.00	38.04
	2007	140.80	27.41	54.40	14.00	0.80	0.80	0.80	0.80	196.00	38.33
	2006	540.00	73.10	382.40	31.00	47.20	11.20			969.60	93.57
	2003	160.80	23.81	134.40	22.43	24.00	6.85			319.20	39.45
Redear sunfish	2012	*	*	5.00	2.10	7.00	5.11			12.00	6.41
	2011	3.00	2.10	12.00	7.41	2.00	2.00			17.00	10.41
	2010	3.00	1.46	8.00	4.00	4.00	2.14			15.00	3.84
	2009			2.00	1.31	5.00	2.10	2.00	2.00	9.00	4.88
	2008			1.00	1.00	3.00	2.10	2.00	1.31	6.00	2.90
	2007			4.00	1.79	1.60	1.07			5.60	2.40
	2006	2.40	1.22	4.80	2.72	8.80	3.86			22.86	5.90
	2003	0.80	0.80	0.80	0.80	0.80	0.80			4.00	1.79

nedsunlc.d12-d06, d03

* Did not collect sunfish < 3.0 in

Table 40. Bluegill PSD and RSD_8 values from spring electrofishing at Lake Carnico; 95% confidence limits are in parentheses.

Year	No. ≥3.0 in	PSD	RSD_8
2012	82	10 (± 6)	
2011	181	2 (± 2)	
2010	580	10 (± 5)	
2009	168	35 (± 7)	
2008	65	11 (± 8)	
2007	245	15 (± 5)	
2006	537	11 (± 3)	
2003	198	28 (± 6)	0.4 (± 0.8)

nedsunlc.d12-d06, d03

Table 41. Population assessment for bluegill based on samples collected at Lake Carnico from 2006-2012 (scoring based on statewide assessment).

Year		Mean length age-2 at capture	Years to 6.0 in	CPUE ≥6.0 in	CPUE ≥8.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2012	Value			8.00	0.00				
	Score			1	0				
2011	Value	4.1	3+	4.00	0.00	6	Poor	-1.221	70.50%
	Score	2	3	1	0				
2010	Value	4.1	3+	60.00	0.00	8	Fair	-1.088	66.30%
	Score	2	3	3	0				
2009	Value	5.3	3+	59.00	0.00	10	Fair	-0.506	39.70%
	Score	4	3	3	0				
2008	Value	5.3	3+	7.00	0.00	8	Fair	-0.759	53.20%
	Score	4	3	1	0				
2007	Value	5.3	4+	0.80	0.00	7	Fair	-0.561	42.90%
	Score	4	2	1	0				
2006	Value	5.3	4+	47.20	0.00	8	Fair	-0.037	31.10%
	Score	4	2	2	0				

nedsunlc.d06-12; nedaaglc.d06, d10

Table 42. Definition of aquatic vegetation categories

Vegetation Category	Definition	Example
Unvegetated	Sites with no form of vegetation	
Submersed Aquatic Vegetation	True submersed advanced vegetation	Curly Pondweed, American Pondweed, Coontail
Emergent Vegetation	Plants with the majority of the growth above the water	Water Willow, Common Button Bush, Red Maple
Algae	Single celled basic aquatic vegetation	Filamentous Algae, Chara
Non-Rooted Floating Vegetation	Plant whose leaves and fruiting bodies float on the surface of the water with roots that do not extend into the substrate	Duckweed, Watermill
Rooted Floating Vegetation	Plant whose leaves and fruiting bodies float on the surface of the water with roots that extend into the substrate	American Lotus, Water Lilly

Table 43. Frequency of occurrence and percentages of plant types collected during a vegetation survey conducted on 14 August 2012 at Lake Carnico (Nicholas Co.).

	Overall		North Arm		South Arm	
Vegetation classifications	N	Percent of Sites	N	Percent of Sites	N	Percent of Sites
Unvegetated	27	54.00	19	70.00	8	35.00
Submergent Vegetation	21	42.00	8	29.00	13	57.00
Algae	6	12.00	0	0.00	6	26.00
Non-Rooted Floating Vegetation	1	2.00	1	4.00	0	0.00
Emergent Vegetation	0	0.00	0	0.00	0	0.00
Rooted Floating Vegetation	0	0.00	0	0.00	0	0.00

Table 44. Frequency of occurrence of vegetation found in Lake Carnico during Summer 2012 vegetation sampling.

Species		Overall		North Arm		South Arm	
Scientific name	Common name	(N=50)	Devation (%)	N	Devation (%)	N	Devation (%)
	Unvegetated	27		19		8	
Najas marina	Spiny Naiad	2	7.5	0		2	8.3
Ceratophyllym demersum	Coontail	21	28.4	8	31.9	13	26.5
Lemna minor	Duckweed	1	<5	1	<5	0	
	Algae	6	9.2	0		6	9.2

Table 45. Mean depths of vegetated and unvegetated sites at Lake Carnico during summer 2012.

	All		North Arm		South Arm	
Site	Mean depth (ft.)	S.E.	Mean depth (ft.)	S.E.	Mean depth (ft.)	S.E.
Vegetated (all forms)	5.52	0.48	6.32	1.12	5.10	0.42
Submergent Only	5.70	0.61	6.32	1.12	5.15	0.59
Algae Only	4.26	1.76			4.26	1.76
Unvegetated	7.70	0.60	8.40	0.71	5.93	0.95

Table 46. Frequency of substrate types sampled for sites vegetated, unvegetated and overall.

	Overall						North Arm						South Arm					
	All		Vegetated		Unvegetated		All		Vegetated		Unvegetated		All		Vegetated		Unvegetated	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Rock/Silt	17	34	8	35	9	33	5	19	0	0	5	26	12	52	8	53	4	50
Silt	16	32	5	22	11	41	12	44	2	25	10	53	4	17	3	20	1	13
Rock	9	18	3	13	6	22	4	15	0	0	4	21	5	22	3	20	2	24
Sand	3	6	3	13	0	0	3	11	3	38	0	0	0	0	0	0	0	0
Clay	1	2	1	4	0	0	1	4	1	12	0	0	0	0	0	0	0	0
Unknown	4	8	3	13	1	4	2	7	2	25	0	0	2	9	1	7	1	13

Table 47. Length frequency and CPUE (fish/hr) of largemouth bass collected in 0.375 hours of nocturnal electrofishing (3- 7.5-minute runs) at Clear Creek Lake (Bath Co.) on 19 April 2012.

	Inch class																	
Species	4	5	6	7	8	9	10	11	12	14	17	18	19	20	23	Total	CPUE	Std. error
Largemouth bass	10	13	3	4	27	32	24	5	3	1	1	1	1	2	1	128	341.33	49.39

nedpsdcc.d12

Table 48. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Clear Creek Lake.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std.err	CPUE	Std. err	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	80.00	20.13	234.67	41.40	10.67	2.67	16.00	8.00	8.00	0.00	341.33	49.39
2011	No sample due to high water											
2010	No sample due to density of aquatic vegetation											
2009	82.67	10.67	36.00	9.24	16.00	4.62	8.00	4.62	5.33	2.67	261.33	31.44
2008	378.00	66.40	162.00	13.22	12.00	5.16	10.00	3.83	4.00	2.31	562.00	55.10
2007	197.30	23.20	149.30	11.60	46.70	19.20	16.00	8.00	8.00	4.67	405.30	35.30
2006	136.00	20.10	189.30	13.30	10.70	7.10	13.30	7.10	2.67	2.67	349.30	16.20
2005	168.00	42.30	80.00	28.80	13.30	7.10	5.30	2.70			266.70	65.70
2004	122.70	27.10	109.30	26.30	16.00	8.00	13.30	2.70	2.67	2.67	261.30	34.70

nedpsdcc.d04 - 09, 12

Table 49. Largemouth bass PSD and RSD_{15} values from spring electrofishing at Clear Creek Lake; 95% confidence limits are in parentheses.

Year	No. ≥ 8.0 in	PSD	RSD_{15}
2012	98	10 (± 6)	6 (± 5)
2011	No sample - high water		
2010	No sample - due to density of aquatic vegetation		
2009	36	25 (± 14)	8 (± 9)
2008	92	12 (± 7)	5 (± 5)
2007	78	28 (± 10)	8 (± 6)
2006	80	11 (± 7)	6 (± 5)
2005	37	19 (± 26)	5 (± 15)

nedpsdcc.d05-09; 12

Table 50. Population assessment of largemouth bass based on samples collected at Clear Creek Lakein 2009 and 2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2012	Value	10.6	65.60	10.67	16.00	8.00	12	Good	1.31	73.00%
	Score	2	3	1	2	4				
2009	Value	10.6	56.00	8.00	4.00	5.33	12	Good	0.643	47.50%
	Score	2	3	1	2	4				

nedpsdcc.d09, 12; nedaagcc.d09

Sampling could not be conducted during 2010 and 2011 due to abundance of aquatic vegetation and high water, respectively.

Table 51. Length frequency and CPUE (fish/hr) of sunfish collected in 0.50 hour of electrofishing (4- 7.5-minute runs) for sunfish at Clear Creek Lake on 10 May 2012.

	Inch class								Std.
Species	3	4	5	6	7	8	Total	CPUE	error
Bluegill	24	8	5	2	25	1	65	130.00	26.41
Redear sunfish	4	2	5	31	30	1	73	146.00	36.57
Longear sunfish	2	1					3	6.00	2.00
Warmouth	2	2	20	13	3		40	80.00	25.51
Green sunfish	4	2	3				9	18.00	12.81

nedsuncc.d12

Table 52. Spring electrofishing CPUE (fish/hr) for each length group of sunfish collected at Clear Creek Lake.

		Length group									
		<3.0 in		3.0-5.9 in		6.0-7.9 in		≥8.0 in		Total	
Species	Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
	2012			74.00	18.00	54.00	36.86	2.00	2.00	130.00	26.41
	2011	494.00	161.84	150.00	36.13	54.00	22.24			698.00	151.20
	2010	1132.00	565.84	210.00	42.13	38.00	30.18			1380.00	585.12
Bluegill	2009	121.60	44.57	174.40	43.04	33.6	13.48			329.60	54.16
	2008	378.00	162.76	112.00	33.15	72.00	69.36			562.00	138.15
	2007			122.00	16.50	102.00	33.84			224.00	50.28
	2006	164.00	83.40	268.00	54.60	32.00	18.60	2.70	1.70	561.60	139.70
	2012			22.00	6.83	122.00	38.56	2.00	2.00	146.00	36.57
	2011	16.00	9.80	76.00	19.73	330.00	78.48	38.00	32.72	460.00	124.34
	2010	12.00	5.16	260.00	62.44	358.00	86.86	6.00	3.83	636.00	146.44
Redear sunfish	2009	4.80	1.96	238.40	37.81	129.60	68.42	1.60	1.60	374.40	98.81
	2008	58.00	29.64	17.00	26.81	22.00	9.45	4.00	2.31	254.00	43.74
	2007			112.00	14.97	104.00	35.33	44.00	6.93	260.00	52.51
	2006	60.80	18.70	60.80	18.00	24.00	10.40	4.80	2.00	150.40	23.40

nedsuncc.d06-d12

No sunfish < 2.9 in were collected during 2012

Table 53. PSD and RSD_8 values obtained from bluegill collected at Clear Creek Lake during May 2012 compared to past years; 95% confidence intervals are in parentheses.

Year	No. ≥3.0 in	PSD	RSD_8
2012	65	43 (±12)	2 (±2)
2011	102	26 (±9)	*
2010	124	15 (±6)	*
2009	130	16 (±6)	*
2008	92	39 (±10)	*
2007	112	45 (± 9)	*

* No 8.0 in fish captured to caculate RSD_8

nedsuncc.d07 - d12

Table 54. Population assessment of bluegill based on samples collected at Clear Creek Lake from 2006-2012 (scoring based on statewide assessment).

Year		Mean length age-2 at capture	Years to 6.0 in	CPUE ≥6.0 in	CPUE ≥8.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2012	Value			56.00	2.00				
	Score			3	1				
2011	Value	3.4	3-3+	54.00	0.00	7	Fair	-0.947	61.20%
	Score	1	3	3	0				
2010	Value	3.4	3-3+	38.00	0.00	6	Poor	-1.309	73.00%
	Score	1	3	2	0				
2009	Value	3.4	4-4+	33.60	0.00	5	Poor	-0.786	54.40%
	Score	1	2	2	0				
2008	Value	5.1	3-3+	72.00	0.00	10	Good	-1.660	80.90%
	Score	4	3	3	0				
2007	Value	5.1	3-3+	102.00	0.00	11	Good	-1.770	83.00%
	Score	4	3	4	0				
2006	Value	5.1	3-3+	35.60	1.30	10	Good	-1.930	86.00%
	Score	4	3	2	1				

nedsuncc.d06-12; nedaagcc.d09, d02

* Age spread too unnatural for proper determination.

Table 55. Population assessment of redear sunfish based on samples collected at Clear Creek Lake in 2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Years to 8.0 in	CPUE ≥8.0 in	CPUE ≥10.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2012	Value			2.00	0.00				
	Score			1	0				
2011	Value	6.1	6-6+	38.00	0.00	8	Fair	*	*
	Score	3	1	4	0				
2010	Value	6.1	6-6+	6.00	0.00	6	Poor	*	*
	Score	3	1	2	0				
2009	Value	6.1	5-5+	1.60	0.00	6	Poor	-1.495	77.60%
	Score	3	2	1	0				

nedsuncc.d09-12; nedaagcc.d09

* Age spread too unnatural for proper determination.

Table 56. Length frequency and CPUE (fish/hr) of black bass collected in 1.5 hours of nocturnal electrofishing (6- 15-minute runs) at Greenbo Lake (Greenup Co.) on 16 April 2012.

	Inch class																							Std.
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	error
Largemouth bass	1	5	5	2	4	21	36	32	33	66	64	25	8	2	1	4	1	2		2	1	315	210.00	21.06

nedpsdgb.d12

Table 57. Length frequency and CPUE (fish/hr) of stocked and wild largmouth bass collected in 1.5 hours of nocturnal electrofishing at Greenbo Lake on 16 April 2012.

		Inch class																						Std.
Species	Type	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	error
Largemouth bass	Wild	1	5	5	2	4	21	34	30	32	66	64	25	8	2	1	4	1	2		2	1	310	206.67	20.78
	Stocked							2	2	1													5	3.33	1.23

nedwldgb.d12, nedstkgb.d12

Table 58. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Greenbo Lake.

	Length group										Total	
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in			
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	25.33	4.81	111.33	11.84	64.67	7.96	8.67	2.81	2.00	0.89	210.00	21.06
2011	46.00	13.09	91.33	9.32	58.00	8.93	6.67	3.21	1.33	0.84	202.00	14.81
2010	78.00	12.85	87.33	3.49	45.33	9.28	13.33	5.81	2.00	1.37	224.00	11.27
2009	44.67	9.43	60.00	8.70	50.00	7.98	18.00	3.39	2.67	1.33	172.67	16.70
2008	24.00	7.23	27.33	5.79	19.33	2.81	9.33	3.04	2.67	1.33	80.00	15.21
2007			39.33	11.84	48.67	13.32	8.67	2.40	1.33	1.33	164.67	21.45
2006	28.00	5.27	66.00	12.17	50.00	7.78	18.67	4.70	7.33	2.40	162.67	19.83
2005	42.00	20.34	58.67	9.56	28.00	3.43	13.33	3.53	3.33	1.23	142.00	22.46
2004	14.00	2.88	116.80	9.87	58.80	7.45	16.80	2.97	4.00	1.03	206.40	14.09
2003	101.33	20.57	76.00	18.68	45.33	4.34	10.67	3.37	2.00	0.89	233.33	41.37
2002					*No data collected*							
2001	79.00	8.06	64.00	3.27	42.00	8.08	5.00	1.00	1.00	1.00	190.00	4.76
2000	41.00	9.00	90.00	15.71	26.00	2.58	4.00	1.63			161.00	24.84
1999	88.00	14.33	84.00	5.66	26.00	8.08	6.00	3.83	3.00	3.00	204.00	17.44
1998	77.00	26.65	119.00	16.68	57.00	8.06	7.00	2.52	1.00	1.00	260.00	27.18

nedpsdgb.d12 - d98

Malfunctioning electrofishing boat in 2008

Table 59. Largemouth bass PSD and RSD_{15} values from spring electrofishing at Greenbo Lake; 95% confidence limits are in parentheses.

Year	No. ≥ 8.0 in	PSD	RSD_{15}
2012	277	40 (± 6)	5 (± 3)
2011	234	41 (± 6)	4 (± 3)
2010	88	40 (± 13)	9 (± 8)
2009	192	53 (± 7)	14 (± 5)
2008	84	51 (± 11)	9 (± 8)
2007	188	47 (± 7)	7 (± 4)

nedpsdgb.d12 - d07

Malfunctioning electrofishing boat in 2008

Table 60. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Greenbo Lake from 2000 - 2012.

	Year											
Age	2000	2001	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
1	52.87	83.87	105.33	33.63	46.71	35.64	2.10	0.98	3.17	5.33	9.46	2.00
2	66.13	34.13	31.33	87.17	19.96	35.69	50.35	18.05	50.01	79.63	48.91	66.22
3	29.00	56.00	71.33	28.80	51.33	50.67	42.73	18.22	35.65	61.02	60.84	44.53
4	6.00	6.67	9.78	26.67	7.11	14.22	27.22	10.97	23.71	28.05	33.56	62.25
5	4.00	5.33	7.56	17.73	6.89	8.44	16.04	7.91	23.89	13.27	18.00	19.67
6	2.00	1.00	3.33	3.20	2.67	6.67	6.09	3.47	8.23	6.57	5.90	3.33
7	1.00	1.00	2.67	5.20	4.00	3.33	4.13	2.40	6.67	5.47	3.33	1.33
8							0.67	0.67	2.00	0.67		
10												0.67

nedpsdgb.d12 - d00

nedaaggb.d12, d07, d03

Note: Did not sample in 2002 due to lake draw down; malfunctioning electrofishing boat in 2008.

Table 61. Mean back-calculated lengths (in) at each annulus for largemouth bass collected from Greenbo Lake on 16 April 2012, including the range of length of bass at each age and the 95% confidence intervals for each age class.

		Age									
Year	No.	1	2	3	4	5	6	7	8	9	10
2011	3	5.4									
2010	32	5.0	8.3								
2009	14	5.2	8.9	11.2							
2008	16	4.6	8.0	10.6	12.2						
2007	7	4.7	8.9	10.9	12.3	13.5					
2006	3	4.7	10.5	13.2	14.7	16.0	17.4				
2005	1	3.5	5.8	9.1	11.6	13.8	16.1	17.1			
2002	2	4.9	8.0	10.7	12.4	13.6	14.4	15.1	15.6	16.1	16.7
Mean		4.9	8.5	11.0	12.5	14.1	16.1	15.8	15.6	16.1	16.7
Number		78	75	43	29	13	6	3	2	2	2
Smallest		3.3	5.8	9.1	11.2	12.6	14.3	14.9	15.5	16.0	16.5
Largest		7.2	11.5	14.7	16.0	17.5	19.0	17.1	15.8	16.3	16.8
Std error		0.1	0.1	0.2	0.2	0.4	0.7	0.7	0.2	0.2	0.2
95% CI (+)		0.2	0.3	0.3	0.4	0.8	1.5	1.3	0.4	0.7	0.3

Otoliths were used for age-determinations; Intercept=0
nedaaggb.d12

Table 62. Age frequency and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of nocturnal electrofishing at Greenbo Lake during 16 April 2012.

	Inch class																Std
Age	5	6	7	8	9	10	11	12	13	14	15	16	17	19	Total	%	CPUE	error
1	2	1													3	1	2.00	0.86
2		3	21	36	32	7									99	33	66.22	8.67
3						26	22	16	3						67	22	44.53	5.50
4							44	40	9						93	31	62.25	6.87
5								8	13	8	1				30	10	19.67	3.61
6											1		2	2	5	2	3.33	1.84
7													2		2	1	1.33	0.67
10												1			1	0	0.67	0.67
Total	2	4	21	36	32	33	66	64	25	8	2	1	4	2	300	100		
%	1	1	7	12	11	11	22	21	8	3	1	0	1	1	100			

nedaaggb.d12, nedpsdgb.d12

Table 63. Population assessment of largemouth bass based on samples collected at Greenbo Lake from 2004-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2012	Value	11.2	2.00	64.67	8.67	2.00	13	Good	-0.812	56.60%
	Score	3	1	4	2	3				
2011	Value			58.00	6.67	1.33				
	Score			4	2	2				
2010	Value	10.7	5.33	45.33	13.33	2.00	11	Fair	-0.597	45.00%
	Score	2	1	3	2	3				
2009	Value	10.7	3.17	50.00	18.00	2.67	13	Good	-0.415	34.00%
	Score	2	1	4	3	3				
2008	Value	10.7	0.98	19.33	9.33	2.67	9	Fair	-0.642	47.40%
	Score	2	1	1	2	3				
2007	Value	10.7	16.00	48.70	8.70	1.30	11	Fair	-0.687	49.70%
	Score	2	2	3	2	2				
2006	Value	11.7	35.60	50.00	18.70	7.30	17	Excellent	-0.521	40.70%
	Score	4	2	4	3	4				
2005	Value	11.7	46.70	28.00	13.30	3.30	14	Good	-0.493	39.00%
	Score	4	3	2	2	3				
2004	Value	11.7	33.60	58.80	16.80	4.00	16	Good	-0.557	42.70%
	Score	4	2	4	2	4				

nedpsdgb.d04-d12; nedaaggl.d07, d12
Malfunctioning electrofishing boat in 2008

Table 64. Species composition, relative abundance and CPUE (fish/hr) of sunfish collected in 1.25 hours of electrofishing (10- 7.5-minute runs) in Greenbo Lake on 07 May 2012.

	Inch class										Std.
Species	3	4	5	6	7	8	9	10	Total	CPUE	error
Bluegill	132	125	88	54	34	7	2		442	353.60	66.73
Longear sunfish	50	45	19	10					124	99.20	24.04
Redear sunfish	3	2	1	1				1	8	6.40	4.74
Green sunfish	4	2	4	5	1				16	12.80	4.17
Warmouth		1							1	0.80	0.80

nedsungb.d12

Table 65. Spring electrofishing CPUE (fish/hr) for each length group of sunfish collected at Greenbo Lake.

		Length group											
		<3.0 in		3.0-5.9 in		6.0-7.9 in		≥8.0 in		≥10.0 in		Total	
Species	Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
	2012	*	*	276.00	65.56	70.40	5.94	7.20	2.52			353.60	66.73
	2011	693.60	115.60	340.80	60.24	37.60	7.16	13.60	4.78			1085.60	164.18
	2010	721.60	226.24	176.80	40.43	68.00	10.00	24.00	6.31			990.40	255.77
	2009	103.20	35.91	194.40	35.60	35.20	9.56	5.60	2.68			338.40	76.81
Bluegill	2008	80.00	15.23	196.80	51.28	40.80	7.58	6.40	2.00			324.00	56.61
	2007	286.40	50.78	191.20	47.35	45.60	15.09	7.20	2.78			530.40	80.36
	2006	94.40	28.01	159.20	37.27	46.40	5.03	9.60	3.92			309.60	61.57
	2005	116.00	25.53	44.40	59.22	46.40	8.83	3.20	1.77			580.00	89.33
	2003	366.00	41.71	187.00	29.41	11.00	4.73	11.00	5.00	1.00	1.00	575.00	26.10
	2012	*	*	4.80	4.80	0.80	0.80	0.80	0.80	0.80	0.80	6.40	4.74
	2011	0.80	0.80	3.20	1.77	6.40	2.00	4.00	2.46			14.40	4.10
	2010	4.80	2.13	11.20	4.17	8.00	2.39	4.00	2.15	0.80	0.80	28.00	7.28
	2009	0.80	0.80	0.80	0.80	2.40	1.22					4.00	1.79
Redear sunfish	2008			7.20	3.67	5.60	3.38	0.80	0.80			13.60	5.73
	2007	2.40	1.17	12.00	6.11	1.60	1.07					16.00	6.85
	2006	15.20	4.04	7.20	2.78	0.80	0.80	0.80	0.80			24.00	5.84
	2005	2.40	1.71	2.40	1.22	1.60	1.07	4.80	3.20			11.20	3.99
	2003	9.00	5.26	1.00	1.00							10.00	5.77

nedsungb.d12-d05, d03

* <3.0 in were not collected in 2012

Table 66. Bluegill PSD and RSD_8 values from spring electrofishing at Greenbo Lake; 95% confidence limits are in parentheses.

Year	No. ≥3.0 in	PSD	RSD_8
2012	442	22 (± 4)	2 (± 1)
2011	490	13 (± 3)	3 (± 2)
2010	336	34 (± 10)	9 (± 6)
2009	294	17 (± 4)	2 (± 2)
2008	305	19 (± 4)	2 (± 2)
2007	305	22 (± 5)	3 (± 2)

nedpsdgb.d12 - d07

Table 67. Population assessment of bluegill based on samples collected at Greenbo Lake from 2005-2012 (scoring based on statewide assessment).

Year		Mean length age-2 at capture	Years to 6.0 in	CPUE ≥6.0 in	CPUE ≥8.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2012	Value			77.60	7.20				
	Score								
2011	Value	4.9	3.00	51.20	13.60	12	Good	-1.150	68.30%
	Score	3	3	3	3				
2010	Value	4.9	3.00	92.00	24.00	14	Excellent	-1.064	65.50%
	Score	3	3	4	4				
2009	Value	4.9	3.00	40.80	5.60	10	Fair	-1.390	75.10%
	Score	3	3	2	2				
2008	Value	4.9	3.00	47.20	6.40	10	Fair	-0.865	57.90%
	Score	3	3	2	2				
2007	Value	5.2	3.00	52.80	7.20	12	Good	-1.350	74.20%
	Score	4	3	3	2				
2006	Value	5.2	3.00	28.00	4.80	11	Good	-1.310	73.20%
	Score	4	3	2	2				
2005	Value	5.2	3.00	49.60	3.20	11	Good	-1.270	71.90%
	Score	4	3	2	2				

nedsungb.d06-12; nedaaggb.d11, d08

Table 68. Length frequency and CPUE (fish/hr) of largemouth bass ≤ 8.9 in collected in 1.5 hours of diurnal electrofishing (6- 15-minute runs) at Greenbo Lake on 24 September 2012.

	Inch class									Std.
Species	2	3	4	5	6	7	8	Total	CPUE	error
Largemouth bass	68	186	55	18	3	1	2	333	222.00	36.20

nedwrsgb.d12

This sample was only used to acertain data for the LMB Stocking Initiative

Table 69. Indices of year class strength at age 0 and age 1, and mean lengths (in) of largemouth bass collected in the fall while nocturnal electrofishing (diurnal sampling in 2012) at Greenbo Lake.

	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
Year class	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2012	3.5	0.04	219.33	34.98	13.33	5.90		
2011	3.5	0.15	44.00	11.91	6.00	1.71	2.00	0.86
2010	3.9	0.14	40.67	9.15	8.67	2.62	9.46	2.82
2009	5.1	0.16	48.00	6.02	26.00	4.82	5.33	0.44
2008	3.5	0.06	82.00	7.57	2.00	1.37	3.17	1.26
2007	3.9	0.09	44.70	11.29	3.33	1.19	0.98	0.87
2006	3.6	0.10	45.30	9.16	2.67	1.69	2.10	1.03
2005	3.8	0.12	32.00	7.00	4.00	1.03	35.60	5.45
2004	3.6	0.17	20.00	6.02	2.67	1.33	46.70	21.20
2003	4.4	0.12	45.00	7.72	14.00	3.46	33.60	2.11

nedwrsgb.d12 - d03; nedpsdgb.d12 - 04; nedaaggb.d03, 07, 12

Age break = 6.4 in

Table 70. Length frequency and CPUE (fish/hr) for largemouth bass collected in 1.0 hour of nocturnal electrofishing (4- 15-minute runs) at Mill Creek Lake (Powell/Wolfe Co.) on 01 May 2012.

	Inch class																					Std.
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	error
Smallmouth bass							1														1	1.00	1.00
Largemouth bass	4	10	10	1	2	21	17	35	24	8	7	5	4			3		6		1	158	158.00	27.78

nedpsdmc.d12

Table 71. Spring electrofishing CPUE (fish/hr) for various length groups of largemouth bass collected at Mill Creek Lake from 2000, 2001, 2004 and 2006-2010.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
2012	27.00	11.47	97.00	12.37	20.00	5.42	14.00	2.58	7.00	3.00	158.00	27.78
2011[a]												
2010	43.00	8.06	65.00	6.61	41.00	10.25	12.00	3.65	1.00	1.00	161.00	9.98
2009	9.00	3.79	52.00	5.42	44.00	3.27	12.00	4.62	4.00	1.63	117.00	3.42
2008	10.00	3.46	89.00	10.75	38.00	3.46	12.00	3.65	3.00	1.91	149.00	11.00
2007	31.00	5.26	84.00	15.92	31.00	9.00	7.00	2.52			153.00	22.29
2006	45.00	18.50	108.00	10.95	22.00	2.00	7.00	4.43			182.00	28.73
2005[a]												
2004	50.40	16.13	68.00	4.56	17.60	2.04	5.60	1.60	1.60	1.60	283.00	35.92
2003[a]												
2002[a]												
2001	36.00	8.49	59.00	10.63	13.00	3.00	7.00	2.52	1.00	1.00	115.00	17.54
2000	39.00	11.36	70.00	11.49	12.00	3.27	4.00	0.00			125.00	21.63
1999	29.00	6.81	4.00	11.43	70.00	3.42	2.00	1.15			78.00	20.94
1998[a]												
1997	27.00	6.61	44.00	6.73	22.00	3.46	6.00	2.58	3.00	1.91	99.00	13.89
1996[a]												
1995[a]												
1994	91.00	21.00	178.00	4.00	8.00	4.00	5.00	1.00	2.00	0.00	282.00	12.00
1993[a]												
1992	90.00	0.00	44.00	6.00	12.00	2.00	4.00	0.00			150.00	4.00
1991	86.05	6.05	31.47	2.53	19.21	0.79	2.32	0.32			176.00	40.00
1990[a]												

nedpsdmc.d12 - d04; nedlmbmc.d03 - d90

[a] = Lake not sampled

Table 72. Largemouth bass PSD and RSD_{15} values from spring electrofishing at Mill Creek Lake; 95% confidence limits are in parentheses.

Year	No. ≥8.0 in	PSD	RSD_{15}
2012	131	26 (±8)	11 (±5)
2011			
2010	118	45 (±9)	10 (±5)
2009	108	52 (±9)	11 (±6)
2008	139	36 (±8)	9 (±5)
2007	122	31 (±8)	6 (±4)
2006	137	21 (±7)	5 (±4)
2005			
2004	114	25 (±8)	6 (±4)
2003			
2002			
2001	79	25 (±10)	9 (±6)
2000	86	19 (±8)	5 (±4)
1999	49	18 (±11)	4 (±6)
1998			
1997	72	39 (±11)	8 (±6)
1996			
1995			
1994	191	7 (±4)	3 (±2)
1993			
1992	60	27 (±11)	7 (±6)
1991	47	40 (±14)	4 (±6)
1990			

nedpsdmc.d12 - d04; nedlmbmc.d03 - d90

Table 73. Population assessment of largemouth bass based on samples collected at Mill Creek Lake from 1990 - 2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥ 15.0 in	Spring CPUE ≥ 20.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2012	Value		25.00	20.00	14.00	7.00	12	Good		
	Score	2	2	2	2	4				
2011	*no sample collected*									
2010	Value		1.00	41.00	12.00	1.00	10	Fair	--0.302	26.00%
	Score	2	1	3	2	2				
2009	Value		1.00	44.00	12.00	4.00	12	Good	--0.085	8.10%
	Score	2	1	3	2	4				
2008	Value	10.5	2.00	38.00	12.00	3.00	11	Fair	--0.312	26.80%
	Score	2	1	3	2	3				
2007	Value		14.11	31.00	7.00	0.00	7	Poor	--0.825	56.20%
	Score	2	1	2	2	0				
2006	Value		19.56	22.00	7.00	0.00	8	Fair	--0.425	34.90%
	Score	2	2	2	2	0				
2005	*no sample collected*									
2004	Value		16.97	17.00	5.60	1.60	9	Fair	--0.315	27.10%
	Score	2	2	1	2	2				
2003	*no sample collected*									
2002	*no sample collected*									
2001	Value	10.7	30.11	13.00	7.00	1.00	9	Fair		
	Score	2	2	1	2	2				
2000	Value		27.78	12.00	4.00	0.00	7	Poor		
	Score	2	2	1	2	0				
1999	Value		5.78	7.00	2.00	0.00	5	Poor		
	Score	2	1	1	1	0				
1998	*no sample collected*									
1997	Value		6.78	22.00	6.00	3.00	10	Fair		
	Score	2	1.00	2.00	2.00	3.00				
1996	*no sample collected*									
1995	*no sample collected*									
1994	Value		73.22	8.00	5.00	2.00	11	Fair		
	Score	2	3	1	2	3				
1993	*no sample collected*									

Table 73 (cont).

Year		Mean Length Age-3 at Capture	Spring CPUE Age-1	Spring CPUE 12.0-14.9"	Spring CPUE ≥ 15.0" in	Spring CPUE ≥ 20.0"	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
1992	Value		61.22	12.00	4.00	0.00	8	Fair		
	Score	2	3	1	2	0				
1991	Value		81.56	19.21	2.32	0.00	8	Fair		
	Score	2	4	1	1	0				
1990	*no sample collected*									

nedpsdmc.d12 - d04; nedlmbmc.d03 - d90

Table 74. Length frequency and CPUE (fish/hr) for sunfish collected in 1.0 hour of diurnal electrofishing (4- 15-minute runs) at Mill Creek Lake on 17 May 2012.

	Inch class									Std.
Species	3	4	5	6	7	8	9	Total	CPUE	error
Bluegill	43	60	58	36	38	21	3	259	259.00	42.44
Green sunfish	5	12	11	2				30	30.00	17.40
Longear sunfish	10	7	6	1				24	24.00	9.38
Sunfish hybrids		1						1	1.00	1.00

nedsunmc.d12

Table 75. Spring electrofishing CPUE (fish/hr) for various length groups of bluegill collected at Mill Creek Lake from 1990 - 2012.

	Length group										Total		Total CPUE
	<3.0 in		3.0-5.9 in		6.0-7.9 in		≥6.0 in		≥8.0 in				
Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	excluding <3.0 in
2012			161.00	37.36	74.00	8.72	98.00	12.38	24.00	7.12	259.00	42.44	259.00
2011													
2010	254.00	11.94	153.00	23.23	35.00	8.70	46.00	6.22	11.00	3.00	453.00	37.29	199.00
2009	519.00	218.98	193.00	15.26	19.00	7.00	23.00	5.97	4.00	1.63	735.00	234.08	216.00
2008			164.00	49.91	20.00	10.07	28.00	13.66	8.00	4.62	192.00	55.62	192.00
2007			76.00	14.74	18.00	6.19	25.00	7.92	7.00	3.18	101.00	14.02	101.00
2006	124.57	48.94	74.29	16.16	33.14	8.08	42.29	13.03	9.14	7.89	241.14	73.89	116.57
2005	42.29	8.13	98.29	16.16	77.17	12.31	100.57	16.64	22.86	7.49	241.14	17.58	198.85
2004													
2003													
2002													
2001			129.00	36.78	54.00	16.04	56.00	17.05	2.00	2.00	185.00	52.34	185.00
2000			96.00	33.39	43.00	15.26	48.00	14.51	5.00	1.91	144.00	47.86	144.00
1999			8.00	4.62	32.00	10.83	42.00	14.38	10.00	3.83	66.67	2.67	66.67
1998													
1997			84.00	25.66	23.00	5.26	24.00	5.89	1.00	1.00	108.00	30.68	108.00
1996													
1995													
1994			24.00	-	16.00	-	18.00	-	2.00	-	84.00	-	84.00
1993													
1992	65.00	19.00	109.00	55.00	56.00	24.00	58.00	26.00	2.00	2.00	464.00	200.00	399.00
1991	94.95	12.95	83.74	5.74	22.53	1.47	24.48	1.16	2.32	0.32	354.00	18.00	259.05
1990													

nedsunmc.d12 - d05; nedpsdmc.d01 - d91

Table 76. Bluegill PSD and RSD_8 values from spring electrofishing at Mill Creek Lake; 95% confidence limits are in parentheses.

Year	No. ≥3.0 in	PSD	RSD_8
2012	259	38 (±6)	9 (±4)
2011			
2010	199	23 (±6)	6 (±3)
2009	216	11 (±4)	2 (±2)
2008	96	15 (±7)	4 (±4)
2007	101	25 (±8)	7 (±5)
2006	102	36 (±9)	8 (±5)
2005	174	51 (±7)	11 (±5)
2004			
2003			
2002			
2001	185	30 (±7)	1 (±1)
2000	144	33 (±8)	3 (±3)
1999	50	84 (±10)	20 (±11)
1998			
1997	108	22 (±8)	9 (±2)
1996			
1995			
1994	21	43 (±22)	5 (±9)
1993			
1992	167	23 (±9)	2 (±3)
1991	95	35 (±7)	1 (±2)
1990			

nedsunmc.d12 - d05; nedpsdmc.d01 - d91

Table 77. Population assessment of bluegill based on samples collected at Mill Creek Lake from 1990-2012 (scoring based on statewide assessment).

Year		Mean length age-2 at capture	Years to 6.0 in	Spring CPUE ≥6.0 in	Spring CPUE ≥8.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2012	Value			98.00	24.00	13	Good		
	Score	2	3	4	4				
2011	*no sample*								
2010	Value	3.9	3-3+	46.00	11.00	10	Fair	-1.503	77.80%
	Score	2	3	2	3				
2009	Value			23.00	4.00	6	Poor	-165.000	68.80%
	Score	2	2	1	1				
2008	Value			28.00	8.00	8	Fair	-0.580	44.10%
	Score	2	2	2	2				
2007	Value	4.4	4-4+	25.00	7.00	8	Fair	-1.391	75.10%
	Score	2	2	2	2				
2006	Value			42.29	9.14	10	Fair	-0.691	49.90%
	Score	3	3	2	2				
2005	Value			100.57	22.89	14	Excellent	-0.451	36.40%
	Score	3	3	4	4				
2004	*no sample*								
2003	*no sample*								
2002	*no sample*								
2001	Value	4.6	3-3+	56.00	2.00	10	Fair		
	Score	3	3	3	1				
2000	Value			48.00	5.00	10	Fair		
	Score	3	3	2	2				
1999	Value			42.00	10.00	11	Good		
	Score	3	3	2	3				
1998	*no sample*								
1997	Value			24.00	1.00	8	Fair		
	Score	3	3	1	1				
1996	*no sample*								
1995	Value								
1994	Value			18.00	2.00	8	Fair		
	Score	3	3	1	1				
1993	*no sample*								
1992	Value			58.00	2.00	10	Fair		
	Score	3	3	3	1				
1991	Value			24.84	2.32	8	Fair		
	Score	3	3	1	1				
1990	*no sample*								

nedsunmc.d12 - d05; nedpsdmc.d01 - d91

Table 78. Length frequency and CPUE (fish/hr) for largemouth bass collected in 1.5 hours of nocturnal electrofishing (6- 15-minute runs) at Lake Reba (Madison Co.) on 16 April 2012.

	Inch class																						Std.
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	error
Largemouth bass	1	18	50	59	27	21	45	33	37	54	32	16	10	9	3	1			1	1	418	278.67	13.53

nedpsdlr.d12

Table 79. Length frequency and CPUE (fish/hr) of stocked* and wild largemouth bass collected in 1.5 hours of nocturnal electrofishing at Lake Reba.

	Inch class																						Std.
Type	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	21	Total	CPUE	error
Wild	1	18	50	59	27	21	38	30	37	52	32	16	10	9	3	1			1	1	406	270.67	15.51
Stocked							7	3		2											12	8.00	3.10

nedwldlr.d12; nedstklr.d12

*Stocked in 2009 and 2010 as part of the LMB stocking initative

Table 80. Spring electrofishing CPUE (fish/hr) for various length groups of largemouth bass collected at Lake Reba from 1995-2012.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
2012	103.33	16.51	90.67	8.98	68.00	8.20	16.67	4.18	1.33	0.84	278.67	13.53
2011	66.00	11.44	108.67	16.79	106.00	18.58	25.33	6.08	2.00	1.37	306.00	35.82
2010	67.68	8.08	118.26	19.39	57.68	8.01	6.75	1.66	0.67	0.67	246.00	26.83
2009	47.33	7.55	238.67	12.89	92.67	7.33	26.00	3.22	0.67	0.67	404.67	23.38
2008	77.33	18.44	208.00	28.36	34.00	6.26	12.67	2.62	0.00		332.00	47.08
2007	134.67	20.93	216.67	45.87	60.67	5.21	18.67	4.09	0.67	0.67	430.67	52.20
2006	189.33	18.87	70.67	13.45	26.00	4.93	6.00	2.25	0.00		292.00	27.07
2005	53.33	9.33	57.33	8.11	45.33	4.34	13.33	2.23	0.67	0.67	169.33	16.35
2004	30.00	8.93	125.33	21.46	51.33	9.20	6.67	2.23	0.00		213.33	26.02
2003	110.00	17.85	126.00	10.92	52.00	6.11	8.00	2.53	0.67	0.67	296.00	27.34
2002	138.00	33.57	140.00	31.28	31.00	6.61	5.00	1.00	0.00		314.00	66.98
2001	196.00	24.98	32.00	15.14	9.33	5.33	4.00	2.31	0.00		241.33	32.36
2000	104.06	17.30	35.08	6.64	4.58	0.58	8.00	3.27	0.00		151.72	11.27
1999	122.67	29.42	10.00	3.54	8.00	2.07	18.00	4.70	0.67	0.67	158.67	27.26
1998	76.00	23.66	10.00	2.58	23.00	5.51	21.00	3.42	2.00	1.15	130.00	28.54
1997												
1996	104.00	32.17	7.00	3.42	15.00	5.74	14.00	2.58	0.00		140.00	28.75
1995	160.00	52.89	21.00	7.72	74.00	7.39	3.00	1.91	0.00		258.00	61.46

nedpsdlr.d95 - Present

Table 81. Largemouth bass PSD and RSD_{15} values from spring electrofishing at Lake Reba; 95% confidence limits are in

Year	No. ≥8.0 in	PSD	RSD_{15}
2012	263	48 (±6)	10 (±4)
2011	360	55 (±5)	11 (±3)
2010	270	35 (±6)	4 (±2)
2009	536	33 (±4)	7 (±2)
2008	382	18 (±4)	5 (±2)
2007	444	27 (±4)	6 (±2)
2006	154	31 (±7)	6 (±4)
2005	174	51 (±7)	11 (±5)
2004	275	32 (±6)	4 (±2)
2003	279	32 (±5)	4 (±2)
2002	176	20 (±6)	3 (±2)
2001	33	30 (±16)	9 (±10)
2000	43	28 (±14)	19 (±12)
1999	98	72 (±12)	50 (±13)
1998	26	81 (±10)	39 (±13)
1997			
1996	54	96 (±8)	62 (±19)
1995	54	79 (±8)	3 (±3)

nedpsdlr.d12 - d98, d96 - d95

Table 82. Population assessment of largemouth bass based on samples collected at Lake Reba from 1995 - 2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥ 15.0 in	Spring CPUE ≥ 20.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2012	Value		76.00	68.00	16.67	1.33	15	Good		
	Score	3	4	4	2	2				
2011	Value		52.67	106.00	25.33	2.00	16	Good		
	Score	3	3	4	3	3				
2010	Value	11.4	47.12	57.68	6.75	0.67	13	Good	-1.019	63.90%
	Score	3	3	4	2	1				
2009	Value		65.33	92.67	26.00	0.67	14	Good	-0.162	15.00%
	Score	3	3	4	3	1				
2008	Value		113.00	34.00	12.67	0.00	11	Fair	-1.030	64.30%
	Score	3	4	2	2	0				
2007	Value		183.67	60.67	18.67	0.67	15	Good	-1.040	65.00%
	Score	3	4	4	3	1				
2006	Value	11.2	192.00	26.00	6.00	0.00	11	Fair	-0.790	55.00%
	Score	3	4	2	2	0				
2005	Value		41.20	45.33	13.33	0.67	10	Fair	-0.250	22.00%
	Score	2	2	3	2	1				
2004	Value		23.20	51.33	6.67	0.00	10	Fair	-0.290	25.00%
	Score	2	2	4	2	0				
2003	Value		52.13	52.00	8.00	0.67	12	Good	-0.500	39.00%
	Score	2	3	4	2	1				
2002	Value		105.80	31.00	5.00	0.00	10	Fair		
	Score	2	4	2	2	0				
2001	Value	10.1	186.93	9.33	4.00	0.00	9	Fair		
	Score	2	4	1	2	0				
2000	Value	8.8	99.66	4.58	8.00	0.00	8	Fair		
	Score	1	4	1	2	0				
1999	Value		89.73	8.00	18.00	0.67	10	Fair		
	Score	1	4	1	3	1				
1998	Value		67.00	23.00	21.00	2.00	12	Good		
	Score	1	3	2	3	3				
1997		–	–	–	–	–	–			
1996	Value		62.20	15.00	14.00	0.00	7	Poor		
	Score	1	3	1	2	0				
1995	Value		151.00	74.00	3.00	0.00	10	Fair		
	Score	1	4	4	1	0				

Table 83. Length frequency and CPUE (fish/hr) for sunfish collected in 1.0 hour of diurnal electrofishing (8- 7.5-minute runs) at Lake Reba on 16 May 2012.

Species	Inch class						Total	CPUE	Std. error
	3	4	5	6	7	8			
Bluegill	61	49	41	31	7		189	189.00	36.33
Redear sunfish	35	9	35	66	28	1	174	174.00	33.49
Warmouth	4	22	25	20	16	2	89	89.00	20.92
Hybrid sunfish	2	3	6	3	1	1	16	16.00	6.23
Green sunfish	1	2					3	3.00	1.46

nedsunlr.d12

Table 84. Spring electrofishing CPUE (fish/hr) for various length groups of bluegill collected at Lake Reba from 1995 - 2012.

	Length group												
	<3.0 in		3.0-5.9 in		6.0-7.9 in		≥ 6.0 in		≥ 8.0 in		Total		Total CPUE
Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	excluding <3.0 in
2012			151.00	26.42	38.00	14.72	38.00	14.72			189.00	36.63	189.00
2011	2169.00	361.14	919.00	141.70	98.00	26.52	99.00	26.70	1.00	1.00	3187.00	448.67	1018.00
2010	514.40	138.51	375.20	35.47	21.60	4.78	21.60	4.78			911.20	144.80	396.80
2009	527.00	92.98	200.00	19.71	22.00	6.37	22.00	6.37			749.00	100.50	222.00
2008	188.00	41.90	194.00	41.09	71.00	11.60	71.00	11.60			453.00	59.10	265.00
2007			73.00	10.84	29.00	7.70	29.00	7.70			102.00	10.88	102.00
2006	843.20	140.65	228.80	22.88	79.20	20.32	79.20	20.32			1151.20	158.54	308.00
2005	279.20	37.00	308.00	42.74	97.60	19.41	97.60	19.41			684.80	74.40	405.60
2004	199.20	39.38	187.20	26.96	23.20	7.00	23.20	7.00			409.60	58.24	210.40
2003	178.40	27.87	356.00	49.65	49.50	20.06	49.50	20.06			584.00	75.25	405.60
2002	266.00	39.68	703.00	101.96	29.00	10.38	29.00	10.38			998.00	138.32	732.00
2001			1210.67	207.62	89.33	16.71	89.33	16.71			1300.00	220.30	1300.00
2000	7.00	4.73	1181.33	152.34	303.46	12.96	303.46	12.96			1327.00	124.50	1320.00
1999	74.00	74.00	700.00	120.00	48.00	16.00	48.00	16.00			822.00	30.00	748.00
1998			1032.00		4.00		4.00				1036.00	0.00	1036.00
1997													
1996	16.00	12.00	722.00	110.00	22.00	18.00	22.00	18.00			760.00	140.00	744.00
1995			338.00	54.00	32.00	0.00	32.00	0.00			1370.00	54.00	1370.00

nedsunlr.d12 - d98, d96 - d95

Table 85. Bluegill PSD and RSD_8 values from spring electrofishing at Lake Reba; 95% confidence limits are in parentheses.

Year	No. ≥3.0 in	PSD	RSD_8
2012	189	20 (±6)	
2011	1018	10 (±2)	0.10 (±0.19)
2010	496	5 (±2)	
2009	222	10 (±4)	
2008	265	27 (±5)	
2007	102	28 (±9)	
2006	385	26 (±4)	
2005	507	24 (±4)	
2004	263	11 (±4)	
2003	507	12 (±3)	
2002	732	4 (±1)	
2001	975	7 (±2)	
2000	1320	21 (±2)	
1999	374	6 (±2)	
1998	259	0 (±0)	
1997			
1996	372	3 (±2)	
1995	685	2 (±1)	

nedsunlr.d12 - d98, d96 - d95

**No BG over 8.0 in sampled from 1995 - 2010 and 2012 to be able to determine RSD_8*

Table 86. Mean back-calculated lengths (in) at each annulus for bluegill collected from Lake Reba, including size range at each age and 95% confidence intervals.

		Age				
Year	No.	1	2	3	4	5
2011	9	3.2				
2010	9	2.6	4.2			
2009	13	2.5	4.3	5.7		
2008	3	2.3	3.6	5	6.2	
2007	6	2.2	3.5	4.9	5.9	3.7
Mean		2.6	4.0	5.4	6.0	3.7
Number		40	31	22	9	6.0
Smallest		1.8	3.1	4.7	5.5	6.2
Largest		4.1	5.1	6.4	6.5	7.0
Std Error		0.1	0.1	0.1	0.1	0.1
95% CI (±)		0.3	0.3	0.5	0.4	0.5

Otoliths were used for age determination; Intercept = 0

nedaaglr.d12

Table 87. Age frequency and CPUE (fish/hr) of bluegill collected during spring electrofishing in Lake Reba.

	Inch class								Std.
Age	3	4	5	6	7	Total	%	CPUE	error
1	53	6				60	31	59.50	14.83
2	8	43	4			55	29	54.60	10.58
3			33	16		48	26	48.30	15.82
4			4	6		10	5	10.30	3.50
5				9	7	16	9	16.30	6.53
Total	61	49	41	31	7	189	100		
%	32	26	22	16	4	100			

nedaaglr.d12; nedsunlr.d12

Table 88. Population assessment of bluegill based on samples collected at Lake Reba from 1995 - 2012 (scoring based on statewide assessment).

Year		Mean length age-2 at capture	Years to 6.0 in	Spring CPUE ≥6.0 in	Spring CPUE ≥8.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2012	Value	4.0	3+	38.00	0.00	7	Fair	-0.112	10.60%
	Score	2	3	2	0				
2011	Value			99.00	1.00				
	Score			4	1				
2010	Value			21.60	0.00				
	Score			1	0				
2009	Value			22.00	0.00				
	Score			1	0				
2008	Value	4.0	3+	71.00	0.00	8	Fair	-0.719	51.30%
	Score	2	3	3	0				
2007	Value			29.00	0.00				
	Score			2	0				
2006	Value			79.20	0.00				
	Score			4	0				
2005	Value			97.60	0.00				
	Score			4	0				
2004	Value			23.20	0.00				
	Score			1	0				
2003	Value	4.1	3+	49.60	0.00	7	Fair	-0.422	34.40%
	Score	2	3	2	0				
2002	Value			29.00	0.00				
	Score			2	0				
2001	Value			89.33	0.00				
	Score			4	0				
2000	Value	5.0	4+	303.46	0.00	10	Fair		
	Score	4	2	4	0				
1999	Value			48.00	0.00				
	Score			2	0				
1998	Value			4.00	0.00				
	Score			1	0				
1997	Value								
	Score								

Table 88 (cont).

Year		Mean length age-2 at capture	Years to 6.0 in	Spring CPUE ≥6.0 in	Spring CPUE ≥8.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
1996	Value			22.00	0.00				
	Score			1	0				
1995	Value			32.00	0.00				
	Score			2	0				

nedsunlr.d12 - d98, d96 - d95

Table 89. Spring electrofishing CPUE (fish/hr) for various length groups of redear sunfish collected at Lake Reba from 1995 - 2012.

	Length group														
	<3.0 in		3.0-5.9 in		6.0-7.9 in		≥ 6.0 in		≥ 8.0 in		≥ 10.0 in		Total		Total CPUE
Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	excluding <3.0 in
2012			79.00	15.15	94.00	24.46	95.00	25.18	1.00	1.00			174.00	33.49	174.00
2011	31.00	12.60	146.00	19.64	204.00	57.77	210.00	59.40	6.00	3.30			387.00	48.68	356.00
2010	14.40	5.82	101.60	19.16	28.00	7.38	28.80	7.93	0.80	0.80			144.80	28.21	130.40
2009	184.00	52.92	150.00	22.92	60.00	4.54	60.00	4.54					394.00	65.74	210.00
2008	10.00	4.96	134.00	18.31	225.00	17.98	226.00	18.50	1.00	1.00			370.00	32.98	360.00
2007			122.00	16.34	33.00	5.94	35.00	5.00	2.00	1.31			157.00	20.28	157.00
2006	111.20	30.74	121.60	17.19	205.60	44.67	206.40	44.75	0.80	0.80			439.20	51.54	328.00
2005	16.80	5.90	39.20	5.52	196.00	33.38	196.00	33.38					252.00	30.74	235.20
2004	17.60	4.59	59.20	18.33	67.20	13.71	67.20	13.71					144.00	30.38	126.40
2003	13.60	5.73	119.20	19.82	178.40	68.83	178.40	68.83					311.20	82.91	297.60
2002	11.00	1.91	424.00	124.10	151.00	47.93	152.00	48.74	1.00	1.00			587.00	160.31	576.00
2001			220.00	46.13	84.00	32.74	85.33	32.36	1.33	1.33			305.33	39.35	305.33
2000			125.82	39.34	134.90	39.57	134.90	39.57					245.00	74.89	245.00
1999	2.00	2.00	92.00	36.00	122.00	22.00	122.00	22.00					216.00	60.00	214.00
1998			80.00		44.00		44.00						124.00	0.00	124.00
1997															
1996			44.00	20.00	14.00	10.00	14.00	10.00					58.00	30.00	58.00
1995															

nedsunlr.d12 - d98, d96 - d95

Table 90. Redear sunfish PSD and RSD_9 values from spring electrofishing at Lake Reba; 95% confidence limits are in

Year	No. ≥4.0 in	PSD	RSD_9
2012	139	21 (±7)	
2011	310	22 (±5)	0.32 (±0.63)
2010	118	8 (±5)	
2009	175	4 (±3)	
2008	342	11 (±3)	
2007	141	10 (±5)	
2006	297	49 (±6)	
2005	264	19 (±5)	
2004	146	4 (±3)	
2003	359	4 (±2)	
2002	452	6 (±2)	
2001	158	9 (±4)	
2000	216	29 (±6)	
1999	91	4 (±4)	
1997	27		
1998		4 (±7)	
1996	28	4 (±7)	
1995			

nedsunlr.d12 - d98, d96 - d95

**No RE over 9.0 in sampled from 1995 - 2010 or 2012 to be able to determine RSD_9*

Table 91. Mean back-calculated lengths (in) at each annulus for redear sunfish collected from Lake Reba, including size range at each age and 95% confidence intervals.

		Age					
Year	No.	1	2	3	4	5	6
2011	16	3.7					
2010	10	3.2	5.4				
2009	6	2.7	4.58	6.3			
2008	11	2.5	4.2	5.6	6.8		
2007	1	2.7	4.1	5.2	6.3	7.1	
2006	1	3.5	5.2	6.1	6.9	7.5	8.1
Mean		3.1	4.7	5.8	6.8	7.3	8.1
Number		45	29	19	13	2.0	1.0
Smallest		2.1	3.8	5.1	5.9	7.1	8.1
Largest		4.4	6.1	6.9	7.6	7.5	8.1
Std Error		0.1	0.1	0.1	0.1	0.2	
95% CI (±)		0.3	0.5	0.5	0.6	0.8	

Otoliths were used for age determination; Intercept = 0

nedaaglr.d12

Table 92. Age frequency and CPUE (fish/hr) of redear sunfish collected during spring electrofishing in Lake Reba.

	Inch class									Std.
Age	3	4	5	6	7	8	Total	%	CPUE	error
1	35	7					42	24	42.20	11.38
2		2	30	11			43	25	42.80	8.52
3			5	28			33	19	32.50	8.90
4				28	24		52	30	51.50	12.67
5					4		4	2	4.00	1.04
6						1	1	1	1.00	1.00
Total	35	9	35	66	28	1	174	100		
%	20	5	20	38	16	1	100			

nedaaglr.d12; nedsunlr.d12

Table 93. Population assessment of Redear Sunfish based on samples collected at Lake Reba from 1995 - 2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Years to 8.0 in	Spring CPUE ≥8.0 in	Spring CPUE ≥10.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2012	Value	5.8	>6	1.00	0.00	4	Poor	-0.963	61.80%
	Score	2	1	1	0				
2011	Value			6.00	0.00				
	Score			2	0				
2010	Value			0.80	0.00				
	Score			1	0				
2009	Value			0.00	0.00				
	Score			0	0				
2008	Value	6.3	>7	1.00	0.00	5	Poor	-0.810	55.70%
	Score	3	1	1	0				
2007	Value			2.00	0.00				
	Score			1	0				
2006	Value			0.80	0.00				
	Score			1	0				
2005	Value			0.00	0.00				
	Score			0	0				
2004	Value			0.00	0.00				
	Score			0	0				
2003	Value	6.5	>6	0.00	0.00	5	Poor	-0.322	27.90%
	Score	4	1	0	0				
2002	Value			1.00	0.00				
	Score			1	0				
2001	Value			1.33	0.00				
	Score			1	0				
2000	Value			0.00	0.00				
	Score			0	0				
1999	Value			0.00	0.00				
	Score			0	0				
1998	Value			0.00	0.00				
	Score			0	0				

Table 94. Length frequency and CPUE (fish/hr) for young-of-year largemouth bass collected in 1.42 hours of diurnal electrofishing (5-, 15- and 1- 10-minute runs) at Lake Reba on 17 September 2012.

	Inch class											Std.
Species	2	3	4	5	6	7	8	9	10	Total	CPUE	error
Largemouth bass	2	61	64	29	43	73	69	37	1	379	270.24	25.32

nedbsilr.d12

Table 95. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass while nocturnal electrofishing at Lake Reba

		Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
Year class	Area	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2012	Total	4.5	0.1	129.06	16.78	37.18	6.03		
2011	Total	4.4	0	334.89	44.80	84.44	19.50	76.00	14.90
2010	Total	3.9	0.1	58.67	18.87	10.67	4.81	57.33	10.52
2009	Total	4.0	0.1	58.67	15.55	11.33	8.13	47.12	6.99
2008	Total	4.2	0.1	58.67	15.55	11.33	8.13	65.33	7.06
2007	Total	4.3	0.1	44.00	11.20	5.30	2.20	113.00	27.17
2006	Total	4.3	0.0	175.30	35.90	30.00	8.70	183.70	22.10
2005	Total	5.2	0.1	225.00	48.60	133.00	30.20	192.00	19.50
2004	Total	4.2	0.1	76.70	9.60	15.30	1.90	61.00	10.40
2003	Total	3.7	0.2	23.30	4.80	0.67	0.67	47.30	14.00

nedbsilr.d12. nedwrslr.d11 - d03, nedpsdlr.d12-d02

Table 96. Length frequency and CPUE (fish/hr) of sunfish collected in 0.375 hours of electrofishing (3- 7.5-min runs) for sunfish at Rebel Trace on 30 May 2012.

	Inch class								Std.
Species	3	4	5	6	7	8	Total	CPUE	error
Bluegill	9	7	8	18	5		47	125.33	56.44
Redear sunfish	2	8	13	40	32	5	100	266.67	11.62
Warmouth	1	1	4	6	3	1	16	42.67	18.67
Green sunfish	1			1			2	5.33	2.67

nedsunrt.d12

Table 97. Spring electrofishing CPUE (fish/hr) for each length group of sunfish collected at Rebel Trace.

		Length group											
		<3.0 in		3.0-5.9 in		6.0-7.9 in		≥8.0 in		≥10.0 in		Total	
Species	Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
	2012			64.00	30.29	61.33	26.26					125.33	56.44
	2011	493.33	49.39	200.00	46.88	72.00	16.65					765.33	83.82
	2010	86.00	35.38	208.00	53.17	116.00	28.00	4.00	4.00			414.00	70.46
Bluegill	2009	538.00	214.60	460.00	188.54	70.00	30.53					1068.00	394.96
	2008	518.40	41.21	337.60	49.15	16.00	7.16					872.00	62.38
	2007			348.00	89.10	40.00	13.50					388.00	101.20
	2006	124.00	27.00	246.00	72.80	50.00	34.60					420.00	87.70
	2012			61.33	22.78	192.00	28.10	13.3	5.33			266.67	11.62
	2011	45.33	18.67	120.00	32.33	122.67	11.62	2.67	2.67			290.67	58.67
	2010	4.00	2.31	124.00	41.63	166.00	38.70	24.00	14.24	2.00	2.00	318.00	65.59
Redear sunfish	2009	34.00	17.40	172.00	76.56	24.00	10.83	2.00	2.00			232.00	91.62
	2008	70.40	11.14	432.40	47.63	41.60	12.50					574.40	41.83
	2007			544.00	107.80	84.00	14.10	4.00	2.30			632.00	99.10
	2006	172.00	60.30	282.00	53.70	22.00	19.40	18.00	6.80			494.00	47.80

nedsunrt.d12 - 06

Table 98. PSD and RSD_8 values obtained from bluegill collected at Rebel Trace Lake during May 2012 compared to past years; 95 % confidence intervals are in parentheses.

Year	No. ≥3.0 in	PSD	RSD_8
2012	47	49 (±14)	*
2011	102	26 (±9)	*
2010	164	37 (±15)	1 (±1)
2009	265	13 (±4)	*
2008	221	5 (±3)	*
2007	195	10 (±4)	*

* = No 8.0 in fish captured to caculate RSD_8

nedsunrt.d07 - d12

Table 99. PSD and RSD_9 values obtained from redear sunfish collected at Rebel Trace Lake during May 2012 compared to past years; 95% confidence intervals are in parentheses.

Year	No. ≥4.0 in	PSD	RSD_9
2012	98	37 (±14)	
2011	78	24 (±10)	
2010	154	29 (±7)	1 (±2)
2009	88	2 (±3)	
2008	206	4 (±3)	
2007	280	5 (±3)	1 (±1)

nedsunrt.d07 - d12

Table 100. Population assessment of bluegill based on samples collected at Rebel Trace Lake from 2006-2012 (scoring based on statewide assessment).

Year		Mean length age-2 at capture	Years to 6.0 in	CPUE ≥6.0 in	CPUE ≥8.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2012	Value			61.33	0.00				
	Score			3	0				
2011	Value	3.8	4 - 4+	72.00	0.00	7	Fair	-0.715	51.10%
	Score	2	2	3	0				
2010	Value	3.8	4 - 4+	120.00	4.00	11	Good	-0.443	35.80%
	Score	2	2	4	3				
2009	Value	3.8	4 - 4+	70.00	0.00	7	Fair	-0.760	53.30%
	Score	2	2	3	0				
2008	Value	4.3	3 - 3+	16.00	0.00	6	Poor	-1.919	85.30%
	Score	2	3	1	0				
2007	Value	4.3	3 - 3+	40.00	0.00	7	Fair	-1.360	74.30%
	Score	2	3	2	0				
2006	Value	4.3	3 - 3+	50.00	0.00	8	Fair	-1.216	70.40%
	Score	2	3	3	0				

nedsunrt.d06-d12; nedaagrt.d09, 02

Table 101. Population assessment of redear sunfish based on samples collected at Rebel Trace Lake from 2009-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Years to 8.0 in	CPUE ≥8.0 in	CPUE ≥10.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2012	Value			13.33	0.00				
	Score			3	0				
2011	Value	6.0	4 - 4+	2.67	0.00				
	Score	3	3	1	0	7	Fair	-0.252	22.30%
2010	Value	6.0	4 - 4+	24.00	2.00	12	Good	-0.323	27.60%
	Score	3	3	4	2				
2009	Value	6.0	6 - 6+	2.00	0.00	5	Poor	-1.328	73.50%
	Score	3	1	1	0				

nedsunrt.d09-d12; nedaagrt.d09

Table 102. Length frequency and CPUE (fish/hr) for largemouth bass collected in 0.89 hours of nocturnal electrofishing (3- 15-minute runs, 1- 9-minute run) at Smoky Valley Lake (Carter Co.) on 23 April 2012.

	Inch class																		
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total	CPUE	Std. error
Largemouth bass	1	9	30	20	7	33	47	17	13	11	8	4				1	201	224.72	41.42

nedpsdsv.d12

Table 103. Spring electrofishing CPUE (fish/hr) for various length groups of largemouth bass collected at Smoky Valley Lake from 1990-2012.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
2012	112.06	21.84	98.89	22.26	12.78	1.97	1.00	1.00			224.72	41.42
2011	150.00	33.97	69.00	8.70	10.00	6.22					229.50	31.76
2010	47.73	9.25	65.89	7.81	3.29	1.13	1.00	1.00			117.91	15.25
2009	97.00	6.61	145.00	23.74	14.00	2.58	1.00	1.00			383.00	153.39
2008	155.00	23.29	199.00	34.42	46.00	7.75					607.00	260.17
2007	119.00	21.75	229.00	32.51	37.00	6.40	2.00	1.15			573.00	223.44
2006	112.00	12.75	256.00	33.78	62.00	8.72	4.00	1.63			633.50	234.35
2005	54.40	10.17	190.40	22.65	63.20	9.07	0.80	0.80			397.60	90.90
2004												
2003												
2002												
2001	117.33	11.62	180.00	14.05	46.67	12.72	2.67	2.67			346.67	11.62
2000	68.00	12.96	218.00	22.06	69.00	13.70	1.00	1.00			356.00	46.79
1999												
1998	135.00	32.22	132.00	25.46	75.00	15.09	3.00	1.00			546.00	264.87
1997	46.00	8.87	63.00	5.97	39.00	4.12	3.00	1.91			151.00	3.79
1996	30.00	5.77	77.00	11.47	50.00	7.75	3.00	1.91			160.00	14.33
1995	41.00	14.36	104.00	21.85	84.00	17.66	2.00	2.00			231.00	43.65
1994	72.00	5.89	104.00	14.51	94.00	10.52	7.00	1.91	1.00	1.00	277.00	13.20
1993	34.67	18.27	58.67	28.62	24.67	13.87	4.00	4.00			122.00	63.13
1992	43.41	8.88	96.13	10.89	94.00	6.8.	7.34	3.47	1.78	1.04	261.00	36.78
1991	18.00	2.58	129.00	17.08	18.00	2.00	6.00	1.15	1.00	1.00	171.00	16.92
1990	58.71	9.65	109.18	21.81	34.14	1.16	18.56	5.80	2.43	1.23	352.00	158.04

nedpsdsv.d12, d09-05, d96, nedsprsv.d10, nedlmbsv.d01-00, d98-97, d95-d90

Table 104. Largemouth bass PSD and RSD_{15} values from spring electrofishing at Smoky Valley Lake; 95% confidence limits are in parentheses.

Year	No. ≥8.0 in	PSD	RSD_{15}
2012	101	13 (±7)	1 (±2)
2011	70	14 (±8)	
2010	67	6 (±6)	1 (±3)
2009	160	9 (±5)	1 (±1)
2008	245	19 (±5)	
2007	268	15 (±4)	1 (±1)
2006	322	20 (±4)	1 (±1)
2005	318	25 (±5)	0 (±0)
2004			
2003			
2002			
2001	172	22 (±6)	1 (±2)
2000	288	24 (±5)	0 (±0)
1999			
1998	210	37 (±7)	1 (±2)
1997	105	40 (±9)	3 (±3)
1996	130	41 (±8)	2 (±3)
1995	190	45 (±7)	1 (±1)
1994	205	49 (±7)	3 (±2)
1993	131	33 (±8)	5 (±4)
1992	213	51 (±7)	4 (±3)
1991	153	16 (±6)	4 (±3)
1990	194	30 (±6)	11 (±4)

nedpsdsv.d12, d09-05, d96, nedsprsv.d10, nedlmbsv.d01-00, d98-97, d95-d90

Table 105. Mean back-calculated lengths (in) at each annulus for all largemouth bass collected from Smoky Valley Lake, including size range at each age and 95% confidence intervals.

		Age											
Year	No.	1	2	3	4	5	6	7	8	9	10	11	12
2011	17	5.2											
2010	28	5.3	8.6										
2009	6	4.8	8.4	10.8									
2008	5	4.2	6.7	9.9	11.6								
2007	3	4.9	8.1	9.6	11.3	12.6							
2006	1	3.3	6	8.9	10.3	11.6	13.1						
1999	1	3.7	7.9	9.7	10.4	11.1	11.58	12.3	12.6	12.9	13.4	13.7	14.1
Mean		4.5	8.3	10.1	11.2	12.1	12.4	12.3	12.6	12.9	13.4	13.7	14.1
Number		61	44	16	10	5	2	1	1	1	1	1	1
Smallest		2.6	4.7	8.4	10.3	11.1	11.8	12.3	12.6	12.9	13.4	13.7	14.1
Largest		7.3	10.6	11.5	12.6	13	13.1	12.3	12.6	12.9	13.4	13.7	14.1
Std Error		0.1	0.2	0.2	0.3	0.3	0.3						
95% CI (±)		0.5	0.7	1.0	1.0	1.4	2.5						

Otoliths were used for age determination; Intercept = 0
nedaagsv.d12

Table 106. Age frequency and CPUE (fish/hr) of all largemouth bass collected in the summer of 2012 for comparison to the 2007 age characteristics.

	Inch class											Std.
Age	6	7	8	9	10	11	12	13	Total	%	CPUE	error
1	7	33	6						46	33	51.51	9.69
2			41	17	10	3			72	51	80.55	19.03
3					3	3	3		9	6	9.85	1.29
4						5	3		8	6	8.74	1.30
5							2	3	4	3	4.60	1.11
6								1	1	1	1.46	0.56
Total	7	33	47	17	13	11	8	4	140	100		
%	5	24	34	12	9	8	6	3	100			

nedpsdsv.d12; nedaagsv.d12

Table 107. Mean back-calculated lengths (in) at each annulus for age-4 and younger largemouth bass collected from Smoky Valley Lake, including size range at each age and 95% confidence intervals.

		Age			
Year	No.	1	2	3	4
2011	17	5.2			
2010	28	5.3	8.6		
2009	6	4.8	8.4	10.8	
2008	5	4.2	6.7	9.9	11.6
Mean		5.1	8.4	10.4	11.6
Number		56	39	11	5
Smallest		2.6	4.7	8.7	10.7
Largest		7.3	10.6	11.5	12.6
Std Error		0.1	0.2	0.3	0.3
95% CI (±)		0.4	0.7	1.0	1.3

Otoliths were used for age determination; Intercept = 0
nedyogsv.d12

Table 108. Age frequency and CPUE (fish/hr) of age-4 and younger largemouth bass collected in the summer of 2012 for comparission to the 2007 age characteristics.

	Inch class										Std.
Age	6	7	8	9	10	11	12	Total	%	CPUE	error
1	7	33	6					46	34	51.51	9.69
2			41	17	10	3		72	53	80.55	19.03
3					3	3	4	10	7	10.69	1.16
4						5	4	9	6	9.58	1.20
Total	7	33	47	17	13	11	8	136	100		
%	5	24	35	13	10	8	6	100			

nedpsdsv.d12; nedyogsv.d12

Table 109. Inches of growth between years comparing Smoky Valley Lake in 2007 (prior to the regulation) and 2012 (after the regulation).

		Growth year			
		0 - 1	1 - 2	2 - 3	3 - 4
2007	Mean (in)	5.11	2.99	1.51	1.11
	Number	7	30	13	14
	Std. error	0.06	0.06	0.07	0.09
	95% CI	0.14	0.12	0.16	0.19
2012	Mean (in)	5.1	3.3	2.71	1.64
	Number	56	39	11	5
	Std. error	0.12	0.1	0.3	0.26
	95% CI	0.23	0.2	0.68	0.72
Difference in Means (in)		- 0.01	+ 0.31	+ 1.20	+ 0.53

nedaagsv.d07; nedyogsv.d12

Table 110. Population assessment of largemouth bass based on samples collected at Smoky Valley lake from 1990-2011 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥ 15.0 in	Spring CPUE ≥ 20.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2012	Value	11.50	68.00	12.78	1.00	0.00	9	Fair	-0.936	60.80%
	Score	4	3	1	1	0				
2011	Value		150.50	10.00	0.00	0.00	6	Poor		
	Score	1	4	1	0	0				
2010	Value	9.6	34.92	3.29	1.00	0.00	5	Poor	-0.787	54.50%
	Score	1	2	1	1	0				
2009	Value		9.00	14.00	1.00	0.00	4	Poor	-0.223	20.00%
	Score	1	1	1	1	0				
2008	Value		56.00	46.00	0.00	0.00	7	Poor	-0.550	22.50%
	Score	1	3	3	0	0				
2007	Value	9.6	7.00	37.00	2.00	0.00	6	Poor	-0.513	40.10%
	Score	1	1	3	1	0				
2006	Value		70.07	62.00	4.00	0.00	12	Good	-0.579	43.90%
	Score	3	3	4	2	0				
2005	Value		19.09	36.20	8.00	0.00	10	Fair	-0.353	29.80%
	Score	3	2	3	2	0				
2004										
2003										
2002										
2001	Value	11.0	23.07	46.67	2.67	0.00	9	Fair		
	Score	3	2	3	1	0				
2000	Value		44.00	69.00	1.00	0.00	10	Fair		
	Score	3	2	4	1	0				
1999	Value									
	Score									
1998	Value		51.00	75.00	3.00	0.00	11	Fair		
	Score	3	3	4	1	0				
1997	Value		19.00	39.00	3.00	0.00	9	Fair		
	Score	3	2	3	1	0				
1996	Value		3.00	50.00	3.00	0.00	9	Fair		
	Score	3	1	4	1	0				

Table 110 (cont).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥ 15.0 in	Spring CPUE ≥ 20.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
1995	Value	10.8	5.00	84.00	2.00	0.00	9	Fair		
	Score	3	1	4	1	0				
1994	Value		15.00	94.00	7.00	1.00	11	Fair		
	Score	2	1	4	2	2				
1993	Value	10.2	9.33	24.67	4.00	0.00	7	Poor		
	Score	2	1	2	2	0				
1992	Value	12.4	44.47	94.00	7.34	1.78	14	Good		
	Score	4	2	4	2	2				
1991	Value	10.6	18.80	18.00	6.00	1.00	9	Fair		
	Score	2	2	1	2	2				
1990	Value	9.1	64.26	34.14	18.56	2.43	12	Good		
	Score	1	3	2	3	3				

nedpsdsv.d11, d09-05, d96, nedsprsv.d10, nedlmbsv.d01-00, d98-97, d95-d90

Table 111. Length frequency and CPUE (fish/hr) for sunfish collected in 0.97 hours of diurnal electrofishing (3- 15-min runs; 1- 13.5-minute run) at Smoky Valley Lake on 18 May 2012.

	Inch class								
	3	4	5	6	7	8	Total	CPUE	Std. error
Bluegill	127	61	17	16	9	1	231	237.11	47.40
Green sunfish	37	33	17	6	1		94	97.11	9.26
Longear sunfish	9	3	1				13	13.56	8.08
Sunfish hybrids		1	1				2	2.00	2.00

nedsunsv.d12

Table 112. Spring electrofishing CPUE (fish/hr) for various length groups of bluegill collected at Smoky Valley Lake from 1990-2012.

	Length group												
	<3.0 in		3.0-5.9 in		6.0-7.9 in		≥ 6.0 in		≥ 8.0 in		Total		Total CPUE
Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	excluding <3.0 in
2012			210.56	52.97	25.56	5.37	26.56	5.84	1.00	1.00	237.11	47.40	237.11
2011	742.00	78.12	105.00	23.74	12.00	5.89	13.00	6.61	1.00	1.00	860.00	60.02	118.00
2010	216.90	69.35	166.95	36.82	28.60	6.01	29.60	5.60	1.00	1.00	384.00	97.38	167.10
2009	203.00	34.54	214.00	44.32	24.00	10.71	25.00	11.70	1.00	1.00	442.00	64.36	239.00
2008			53.00	14.36	31.00	13.70	31.00	13.70			84.00	22.74	84.00
2007			89.14	17.14	10.29	5.20	11.43	5.20	1.14	1.14	67.43	13.25	67.43
2006	464.00	116.54	88.00	15.19	16.00	4.28	16.00	4.28			464.50	125.80	0.50
2005	164.00	41.49	169.00	30.33	38.00	8.91	42.00	8.91	4.00	3.02	307.00	70.10	143.00
2004	24.79	6.79	139.32	22.00	25.64	4.82	26.50	4.82	0.85	0.85	190.60	27.31	165.81
2003	200.00	61.11	102.00	30.30	107.00	34.02	111.00	34.02	4.00	2.14	345.00	106.90	145.00
2002													
2001			152.00	12.86	48.00	12.72	53.33	12.72	5.33	3.53	205.33	11.62	205.33
2000			128.00	44.63	66.00	20.29	67.00	20.29	1.00	1.00	195.00	61.02	195.00
1999													
1998			116.00	4.00	90	2.00	90.00	2.00			206.00	6.00	206.00
1997			98.00	46.00	86	42.00	90.00	42.00	4.00	4.00	188.00	88.00	188.00
1996													
1995			78.00	2.00	58.00	4.00	60.00	4.00	2.00	2.00	138.00	2.00	138.00
1994			190.00	10.00	52.00	12.00	56.00	12.00	4.00	4.00	246.00	22.00	246.00
1993	97.00	37.00	68.00	16.00	19.00	8.00	20.00	8.00	1.00	1.00	370.00	90.00	273.00
1992	144.00	96.77	105.33	13.53	46.67	17.02	54.67	17.02	8.00	2.31	304.00	76.14	160.00
1991	6.00	2.00	98.00	2.00	46.00	34.00	50.00	34.00	4.00	4.00	154.00	34.00	148.00
1990	76.00	20.00	642.00	154.00	182.00	32.00	184.00	32.00	2.00	2.00	902.00	206.00	826.00

nedsunsv.d11-d03; nedpsdsv.d01-d00; nedsunsv.d98-d97; d95-d90

Table 113. Bluegill PSD and RSD_8 values from spring electrofishing at Smoky Valley Lake; 95% confidence limits are in parentheses.

Year	No. ≥3.0 in	PSD	RSD_8
2012	231	11 (±4)	0 (±1)
2011	118	11 (±6)	1 (±2)
2010	185	15 (±5)	1 (±1)
2009	239	10 (±4)	0 (±1)
2008	84	37 (±10)	
2007	88	11 (±7)	1 (±2)
2006	104	15 (±7)	
2005	211	20 (±5)	2 (±2)
2004	194	16 (±5)	1 (±1)
2003	213	52 (±7)	2 (±2)
2002			
2001	154	26 (±7)	3 (±3)
2000	195	34 (±7)	1 (±1)
1999			
1998	103	44 (±10)	
1997	94	48 (±10)	2 (±3)
1996			
1995	69	43 (±12)	1 (±3)
1994	123	23 (±7)	2 (±2)
1993	88	23 (±9)	1 (±2)
1992	120	34 (±9)	5 (±4)
1991	74	34 (±11)	3 (±4)
1990	413	22 (±4)	0 (±0)

nedsunsv.d11-d03; nedpsdsv.d01-d00; nedsunsv.d98-d97; d95-d90

Table 114. Mean back-calculated lengths (in) at each annulus for bluegill collected from Smoky Valley Lake, including size range at each age and 95% confidence intervals.

		Age					
Year	No.	1	2	3	4	5	6
2010	18	2.4	4.0				
2009	16	2.3	3.8	5.4			
2008	13	2.1	3.8	5.7	6.8		
2007	2	2.9	5.1	6.3	6.9	7.3	
2006	3	2.4	3.8	5.7	6.8	7.2	7.6
Mean		2.3	3.9	5.6	6.8	7.3	7.6
Number		52	52	34	18	5	3
Smallest		1.7	3.0	4.1	5.4	7.0	7.4
Largest		3.5	6.1	6.6	7.4	7.6	7.8
Std Error		0.1	0.1	0.1	0.1	0.1	0.1
95% CI (±)		0.2	0.4	0.4	0.4	0.5	0.4

Otoliths were used for age determination; Intercept = 0
nedaagsv.d12

Table 115. Age frequency and CPUE (fish/hr) of all bluegill collected in the summer of 2012 for comparission to the 2007 age characteristics.

	Inch class								Std.
Age	3	4	5	6	7	Total	%	CPUE	error
2	127	49		1		177	77	182.47	42.20
3		12	15	8		35	15	35.34	9.82
4			2	7	5	14	6	14.50	2.07
5					2	2	1	1.52	0.30
6					2	2	1	2.28	0.45
Total	127	61	17	16	9	230	100		
%	55	27	7	7	4	100			

nedpsdsv.d12; nedaagsv.d12

Table 116. Population assessment of bluegill based on samples collected at Smoky Valley Lake from 1990 - 2012 (scoring based on statewide assessment).

Year		Mean length age-2 at capture	Years to 6.0 in	Spring CPUE ≥6.0 in	Spring CPUE ≥8.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2012	Value	4.1	3-3+	26.56	1.00	8	Fair	-1.277	72.10%
	Score	2	3	2	1				
2011	Value			13.00	1.00				
	Score			1	1				
2010	Value			29.60	1.00				
	Score			2	1				
2009	Value			25.00	1.00				
	Score			2	1				
2008	Value	3.9	4-4+	31.00	0.00	6	Poor	-0.722	51.50%
	Score	2	2	2	0				
2007	Value			11.43	1.14				
	Score			1	1				
2006	Value			16.00	0.00				
	Score			1	0				
2005	Value			42.00	4.00				
	Score			2	1				
2004	Value			26.50	0.85				
	Score			2	1				
2003	Value	3.2	4-4+	111.00	4.00	8	Fair	-0.523	40.70%
	Score	1	2	4	1				
2002	Value								
	Score								
2001	Value	4.7	4-4+	53.33	5.33	10	Fair		
	Score	3	2	3	2				
2000	Value			67.00	1.00				
	Score			3	1				
1999	Value								
	Score								
1998	Value			90.00	0.00				
	Score			4	0				
1997	Value			90.00	4.00				
	Score			4	1				
1996	Value								
	Score								
1995	Value	4.3	4-4+	60.00	2.00	8	Fair		
	Score	2	2	3	1				
1994	Value			56.00	4.00				
	Score			3	1				
1993	Value	4.7	3-3+	20.00	1.00	8	Fair		
	Score	3	3	1	1				
1992	Value	4.4	4-4+	54.67	8.00	9	Fair		
	Score	2	2	3	2				
1991	Value			50.00	4.00				
	Score			3	1				
1990	Value			184.00	2.00				
	Score			4	1				

nedsunsv.d11-d03; nedpsdsv.d01-d00; nedsunsv.d98-d97; d95-d90

Table 117. Length frequency and CPUE (fish/hr) for largemouth bass collected in 1.5 hours of nocturnal electrofishing (6- 15-minute runs) at Lake Wilgreen (Madison Co.) on 17 April 2012.

	Inch class																					Std.
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	error
Largemouth bass	3	29	12	4	39	83	37	34	23	31	14	25	23	21	23	20	15	14	2	452	301.33	25.14

nedpsdlw.d12

Table 118. Spring electrofishing CPUE (fish/hr) for various length groups of largemouth bass collected at Lake Wilgreen from 1990-2012.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
2012	58.00	13.09	118.00	11.02	46.67	10.15	78.67	8.24	10.67	2.23	301.33	25.14
2011	84.00	18.04	66.00	12.85	25.33	4.09	42.00	4.70	3.30	2.17	217.33	31.24
2010	42.67	5.72	79.33	14.36	53.33	6.50	51.33	4.06	1.30	0.84	226.67	21.73
2009	19.33	5.60	76.00	14.24	52.00	12.04	50.00	9.51	1.30	0.84	197.33	26.53
2008	8.67	1.91	24.67	5.88	18.67	3.82	10.67	3.68	0.67	0.67	62.67	9.04
2007	238.67	25.94	194.67	16.12	115.33	14.95	18.67	2.23	2.67	1.33	567.33	30.63
2006	56.67	9.93	195.33	8.60	148.00	15.76	22.00	5.82	2.67	0.84	422.00	29.06
2005	86.67	17.88	12.00	12.76	108.67	22.99	6.00	2.68			371.33	45.30
2004												
2003	89.20	11.12	376.80	41.02	48.00	6.34	12.80	2.52	0.40	0.40	526.80	50.18
2002												
2001												
2000	361.00	50.95	274.00	10.59	58.00	12.27	6.00	1.15			699.00	57.02
1999	152.00	6.32	235.00	29.59	43.00	11.82	8.00	2.31	2.00	1.15	438.00	42.85
1998												
1997												
1996	149.00	47.82	247.00	24.84	90.00	19.77	15.00	6.19	5.00	1.00	601.00	73.02
1995	77.00	22.65	382.00	45.27	42.00	9.31	10.00	2.58	1.00	1.00	511.00	71.58
1994	298.00	79.47	427.00	50.05	46.00	7.39	24.00	4.90	2.00	1.15	795.00	122.01
1993												
1992	244.00	42.39	100.00	22.27	70.67	14.11	12.00	4.00	1.33	1.33	426.67	64.06
1991	72.00	6.11	206.67	16.71	58.67	5.81	5.33	1.33	1.33	1.33	342.67	18.67
1990												

nedpsdlw.d12-d05, d03, nedlmblw.d00-d99, d96-d94, d92-d91

Table 119. Largemouth bass PSD and RSD_{15} values from spring electrofishing at Lake Wilgreen; 95% confidence limits are in parentheses.

Year	No. ≥8.0 in	PSD	RSD_{15}
2012	365	52 (±5)	32 (±5)
2011	200	51 (±7)	32 (±6)
2010	276	57 (±6)	28 (±5)
2009	267	57 (±6)	28 (±5)
2008	81	54 (±11)	20 (±9)
2007	493	41 (±4)	6 (±2)
2006	548	47 (±4)	6 (±2)
2005	427	40 (±5)	2 (±1)
2004			
2003	1094	14 (±2)	3 (±1)
2002			
2001			
2000	338	19 (±4)	2 (±1)
1999	286	18 (±4)	3 (±2)
1998			
1997			
1996	352	30 (±5)	4 (±2)
1995	434	12 (±3)	2 (±1)
1994	497	14 (±3)	5 (±2)
1993			
1992	137	45 (±8)	7 (±4)
1991	203	24 (±6)	2 (±2)
1990			

nedpsdlw.d12-d05, d03, nedlmblw.d00-d99, d96-d94, d92-d91

Table 120. Population assessment of largemouth bass based on samples collected at Lake Wilgreen from 1996-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥ 15.0 in	Spring CPUE ≥ 20.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2012	Value		30.67	46.67	78.67	10.67	17	Excellent		
	Score	4	2	3	4	4				
2011	Value		55.33	25.33	42.00	3.33	16	Good		
	Score	4	3	2	4	3				
2010	Value		6.00	53.30	51.33	1.33	15	Good	-0.331	28.10%
	Score	4	1	4	4	2				
2009	Value		6.00	52.00	50.00	1.33	15	Good	-0.162	15.00%
	Score	4	1	4	4	2				
2008	Value	12.6	5.33	18.67	10.67	0.67	9	Fair	-0.633	46.90%
	Score	4	1	1	2	1				
2007	Value		229.97	115.33	18.67	2.67	16	Good	-0.580	32.50%
	Score	2	4	4	3	3				
2006	Value		58.14	148.00	22.00	2.67	15	Good	-0.069	6.60%
	Score	2	3	4	3	3				
2005	Value		81.15	108.67	6.00	0.00	12	Good	-0.127	11.90%
	Score	2	4	4	2	0				
2004		–	–	–	–	–				
2003	Value	10.2	91.51	48.00	12.80	0.40	12	Good		
	Score	2	4	3	2	1				
2002		–	–	–	–	–				
2001		–	–	–	–	–				
2000	Value	10.9	54.23	58.00	6.00	0.00	12	Good		
	Score	3	3	4	2	0				
1999	Value		141.50	43.00	8.00	2.00	15	Good		
	Score	3	4	3	2	3				
1998		–	–	–	–	–				
1997		–	–	–	–	–				
1996	Value		225.83	90.00	15.00	5.00	17	Excellent		
	Score	3	4	4	2	4				
1995	Value	11.3	74.67	42.00	10.00	1.00	13	Good		
	Score	3	3	3	2	2				
1994	Value		227.50	46.00	24.00	2.00	16	Good		
	Score	3	4	3	3	3				
1993		–	–	–	–	–				
1992	Value		193.56	70.67	12.00	1.33	15	Good		
	Score	3	4	4	2	2				
1991	Value		62.22	58.67	5.33	1.33	14	Good		
	Score	3	3	4	2	2				
1990		–	–	–	–	–				

nedpsdlw.d12-d05, d03, nedlmblw.d00-d99, d96-d94, d92-d91

Table 121. Length frequency and CPUE (fish/hr) for sunfish collected in 1.25 hours of diurnal electrofishing (10- 7.5-min runs) at Lake Wilgreen on 15 May 2012.

	Inch class						Total	CPUE	Std. error
	3	4	5	6	7	8			
Bluegill	162	397	239	93			891	712.80	59.93
Green sunfish	31	19	14	3	1		68	54.40	17.93
Redear sunfish	4		23	19	5	1	52	41.60	9.89
Warmouth		4	4		1		9	7.20	2.52
Hybrid sunfish		3		2	1		6	4.80	2.13

nedsunlw.d12

Table 122. Spring electrofishing CPUE (fish/hr) for various length groups of bluegill collected at Lake Wilgreen from 1990-2012.

	Length group												
	<3.0 in		3.0-5.9 in		6.0-7.9 in		≥ 6.0 in		≥ 8.0 in		Total		Total CPUE
Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	excluding <3.0 in
2012			638.40	56.95	74.40	15.27	74.40	15.27			712.80	57.93	712.80
2011	476.00	58.63	630.40	90.92	92.80	24.71	92.80	24.71			1199.20	157.96	723.20
2010	464.00	14.05	380.80	28.92	57.60	14.93	57.60	14.93			484.80	43.93	20.80
2009	105.00	23.25	287.00	36.17	109.00	27.38	110.00	27.87	1.00	1.00	502.00	55.67	397.00
2008	50.00	17.02	115.00	17.10	45.00	17.30	45.00	17.30			210.00	38.83	160.00
2007			283.20	26.73	88.80	16.67	88.80	16.67			372.00	39.38	372.00
2006	279.20	51.27	409.60	34.53	64.80	20.36	67.20	20.66	2.40	1.22	756.00	79.72	476.80
2005	211.20	67.00	576.80	73.19	40.80	10.76	41.60	11.11	0.80	0.80	829.60	122.74	618.40
2004													
2003													
2002	354.40	91.56	496.80	99.20	177.60	18.62	177.60	18.62			1028.80	196.17	674.40
2001													
2000			298.00	79.64	100.00	14.33	109.00	16.36	9.00	3.00	407.00	83.19	407.00
1999			214.00	50.00	120.00	64.00	140.00	60.00	20.00	4.00	354.00	110.00	354.00
1998													
1997													
1996			128.00	32.00	202.00	86.00	212.00	84.00	10.00	2.00	340.00	116.00	340.00
1995			332.00	148.00	208.00	8.00	216.00	12.00	8.00	4.00	548.00	160.00	548.00
1994	72.00	44.00	458.00	242.00	294.00	74.00	294.00	74.00			824.00	360.00	752.00
1993													
1992	201.33	27.06	892.00	74.80	14.00	12.22	142.67	9.61	2.67	2.67	1236.00	84.32	1034.67
1991	197.33	60.77	126.67	19.23	134.67	19.64	144.00	22.74	9.33	3.53	468.00	86.19	270.67
1990													

nedsunlw.d12-d05; d02; d00-99; d96-94; d91-92

Table 123. Bluegill PSD and RSD_8 values from spring electrofishing at Lake Wilgreen; 95% confidence limits are in parentheses.

Year	No. ≥3.0 in	PSD	RSD_8
2012	891	10 (±2)	
2011	904	13 (±2)	
2010	548	13 (±3)	
2009	397	28 (±4)	0 (±0)
2008	160	28 (±7)	
2007	465	24 (±4)	
2006	596	14 (±3)	1 (±1)
2005	773	7 (±2)	0 (±0)
2004			
2003			
2002	843	26 (±3)	
2001			
2000	407	27 (±4)	2 (±1)
1999	177	40 (±7)	6 (±3)
1998			
1997			
1996	170	62 (±7)	3 (±3)
1995	274	39 (±6)	1 (±1)
1994	376	39 (±5)	
1993			
1992	776	14 (±2)	0 (±0)
1991	203	53 (±7)	3 (±3)
1990			

nedsunlw.d12-d05; d02; d00-99; d96-94; d91-92

Table 124. Mean back-calculated lengths (in) at each annulus for bluegill collected from Lake Wilgreen, including size range at each age and 95% confidence intervals.

		Age					
Year	No.	1	2	3	4	5	6
2011	2	3.3					
2010	16	2.2	4.1				
2009	3	2.9	4.7	5.7			
2008	15	2.4	4.2	5	5.8		
2007	2	2.8	4.4	5.3	5.9	6.3	
2006	1	1.7	3.2	4.2	5.3	5.7	6.2
Mean		2.4	4.2	5.1	5.8	6.1	6.2
Number		39	37	21	18	3.0	1
Smallest		1.6	3.2	4.2	5	5.7	6.2
Largest		3.5	5.4	6.8	6.5	6.5	6.2
Std Error		0.1	0.1	0.1	0.1	0.2	
95% CI (±)		0.4	0.3	0.5	0.5	1.0	

Otoliths were used for age determination; Intercept = 0
nedaaglw.d12

Table 125. Age frequency and CPUE (fish/hr) of bluegill collected during spring electrofishing in Lake Wilgreen.

	Inch class							Std.
Age	3	4	5	6	Total	%	CPUE	error
1	41				41	5	32.4	4.69
2	122	397	22		540	61	432.18	39.37
3			43	8	52	6	41.53	3.78
4			174	59	233	26	186.4	16.57
5				17	17	2	13.53	2.78
6				8	8	1	6.76	1.39
Total	162	397	239	93	891	100		
%	18	45	27	10	100			

nedaaglw.d12; nedsunlw.d12

Table 126. Population assessment of bluegill based on samples collected at Lake Wilgreen from 1990 - 2012 (scoring based on statewide assessment).

Year		Mean length age-2 at capture	Years to 6.0 in	Spring CPUE ≥6.0 in	Spring CPUE ≥8.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2012	Value	4.2	4-4+	74.40	0.00	8	Fair	-0.935	60.80%
	Score	2	2	4	0				
2011	Value			92.80	0.00				
	Score			4	0				
2010	Value			57.60	0.00				
	Score			3	0				
2009	Value			110.00	1.00				
	Score			4	1				
2008	Value			45.00	0.00				
	Score			2	0				
2007	Value	4.8	4-4+	88.80	0.00	9	Fair	-0.156	10.90%
	Score	3	2	4	0				
2006	Value			67.20	2.40				
	Score			3	1				
2005	Value			41.60	0.80				
	Score			2	1				
2004	Value								
2003	Value								
2002	Value	5.5	3-3+	177.60	0.00	11	Good	-0.360	30.20%
	Score	4	3	4	0				
2001									
2000	Value	4.4	3-3+	109.00	9.00	11	Good		
	Score	2	3	4	2				
1999	Value			140.00	20.00				
	Score			4	4				
1998									
1997									
1996	Value			212.00	10.00				
	Score			4	3				
1995	Value	3.9	4-4+	216.00	8.00	10	Fair		
	Score	2	2	4	2				
1994	Value			294.00	0.00				
	Score			4	0				
1993									
1992	Value			142.67	2.67				
	Score			4	1				
1991	Value			144.00	9.33				
	Score			4	2				
1990									

nedsunlw.d11-d05; d02; d00-99; d96-94; d91-92

Table 127. Spring electrofishing CPUE (fish/hr) for various length groups of redear sunfish collected at Lake Wilgreen from 1990-2012.

	Length group												Total		Total CPUE
	<3.0 in		3.0-5.9 in		6.0-7.9 in		≥ 6.0 in		≥ 8.0 in		≥ 10.0 in				
Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	excluding <3.0 in
2012			21.60	6.09	19.20	6.33	20.00	6.11	0.80	0.80			41.60	9.89	41.60
2011	2.40	1.22	12.00	5.50	24.00	8.52	24.80	8.39	0.80	0.80			39.20	13.72	36.80
2010			12.00	4.34	14.40	3.73	18.40	4.78	4.00	1.79			30.40	6.62	30.40
2009			11.00	4.77	13.00	5.64	27.00	6.58	14.00	2.51	1.00	1.00	38.00	8.52	38.00
2008	3.00	3.00	6.00	3.30	11.00	7.70	12.00	8.68	1.00	1.00			33.60	21.82	30.60
2007			0.80	0.80	15.20	4.37	16.80	4.69	1.60	1.07			22.00	4.47	22.00
2006			20.00	5.09	4.80	2.13	15.20	10.08	10.40	8.77	2.40	1.71	35.20	11.01	35.20
2005			4.00	2.46	7.20	3.67	14.40	5.69	7.20	3.47			26.29	6.46	26.29
2004															
2003															
2002			20.80	9.85	44.00	11.01	48.80	11.95	4.80	2.44			77.33	20.04	77.33
2001															
2000					5.00	2.52	18.00	12.81	13.00	10.38	3.00	1.91	18.00	12.81	18.00
1999			2.00	2.00	8.00	8.00	12.00	12.00	4.00	4.00	2.00	2.00	14.00	10.00	14.00
1998															
1997															
1996			6.00	2.00	30.00	10.00	30.00	10.00					36.00	12.00	36.00
1995			6.00	6.00	4.00	4.00	4.00	4.00					20.00	0.00	20.00
1994	2.00	2.00	8.00	4.00	8.00	4.00	12.00	4.00	4.00	0.00			22.00	10.00	20.00
1993															
1992															
1991															
1990															

nedsunlw.d12-d05; d02; d00-99; d96-94; d91-92

Table 128. Redear Sunfish PSD and RSD_9 values from spring electrofishing at Lake Wilgreen; 95% confidence limits are in parentheses.

Year	No. ≥4.0 in	PSD	RSD_9
2012	48	13 (±9)	
2011	37	14 (±11)	
2010	36	25 (±14)	
2009	33	67 (±16)	18 (±13)
2008	13	31 (±26)	
2007	22	55 (±21)	
2006	40	38 (±15)	20 (±13)
2005	21	57 (±22)	5 (±9)
2004			
2003			
2002	81	23 (±9)	1 (±2)
2001			
2000	18	100 (±0)	33 (±22)
1999	7	57 (±40)	14 (±28)
1998			
1997			
1996	18	22 (±20)	
1995	5	40 (±48)	20 (±39)
1994	10	30 (±30)	10 (±20)
1993			
1992			
1991			
1990			

nedsunlw.d12-d05; d02; d00-99; d96-94; d91-92

Table 129. Mean back-calculated lengths (in) at each annulus for redear sunfish collected from Lake Wilgreen, including size range at each age and 95% confidence intervals.

		Age				
Year	No.	1	2	3	4	5
2011	3	3.4				
2010	9	3.2	5.3			
2009	5	3.6	5.3	6.5		
2008	8	2.8	5.3	6.4	7	
2007	1	3.3	5.9	7.2	7.7	8.1
Mean		3.2	5.3	6.5	7.1	8.1
Number		26	23	14	9	1.0
Smallest		1.9	2.9	5.5	6.6	8.1
Largest		4	6.1	7.2	7.7	8.1
Std Error		0.1	0.1	0.1	0.1	
95% CI (±)		0.3	0.4	0.5	0.4	

Otoliths were used for age determination; Intercept = 0
nedaaglw.d12

Table 130. Age frequency and CPUE (fish/hr) of redear sunfish collected during spring electrofishing in Lake Wilgreen.

	Inch class									Std.
Age	3	4	5	6	7	8	Total	%	CPUE	error
1	4						4	8	3.20	1.77
2			21				21	40	16.56	4.92
3			2	11			13	25	10.53	2.56
4				8	5		13	25	10.51	3.99
5						1	1	2	0.80	0.80
Total	4		23	19	5	1	52	100		
%							100			

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Table 131. Population assessment of Redear sunfish based on samples collected at Lake Wilgreen from 1994 - 2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Years to 8.0 in	Spring CPUE ≥8.0 in	Spring CPUE ≥10.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2012	Value	6.50	5-5+	0.80	0.00	7	Fair	-0.240	21.30%
	Score	4	2	1	0				
2011	Value			8.00	0.00				
	Score			2	0				
2010	Value			4.00	0.00				
	Score			1	0				
2009	Value			14.00	1.00				
	Score			3	1				
2008	Value			1.00	0.00				
	Score			1	0				
2007	Value	7.8	*	1.60	0.00	8	Fair		
	Score	4	3	1	0				
2006	Value			10.40	2.40				
	Score			3	2				
2005	Value			7.20	0.00				
	Score			2	0				
2004									
2003									
2002	Value			4.80	0.00				
	Score			1	0				
2001									
2000	Value			4.80	0.00				
	Score			1	0				
1999	Value			4.00	2.00				
	Score			1	2				
1998									
1997									
1996	Value			0.00	0.00				
	Score			0	0				
1995	Value			4.00	0.00				
	Score			1	0				
1994	Value			4.00	0.00				
	Score			1	0				

* Largest fish aged was 7.9 in and was age-3. Since there has never been a fish aged that was > 8.0 in, the assumption was made based on these fish to call this value at 4-4+ which was a score of 3

nedsunlw.d11-d05; d02; d00-99; d96-94; d91-92

Table 132. Length frequency and CPUE (fish/hr) for largemouth bass and sunfish collected in 0.5 hours of diurnal electrofishing (2- 15-minute runs) at Beech Fork Water Supply Reservoir (Powell Co.) on 09 April 2012.

	Inch class																Std.
Species	1	2	3	4	5	6	7	8	9	10	11	13	19	22	Total	CPUE	error
Largemouth bass			2	6	11	3	4		3	17	7	2	1	1	57	114.00	6.00
Bluegill	61	23	14	7	5	3									113	226.00	114.00
Redear sunfish	2		3	1			1								7	14.00	6.00
Warmouth			4	1	2	1	1								9	18.00	6.00
Green sunfish	1	5	14	5											25	50.00	50.00
Channel catfish												1			1	2.00	2.00
White crappie						2	8	2	1						13	26.00	6.00

nedpsdbf.d12

SOUTHEASTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Conditions encountered during sampling at southeastern district lakes are listed in Table 1.

Lake Cumberland (37,680 acres)

Beginning in January 2007, water levels were reduced to 680 msl to make repairs to Wolf Creek Dam. As a result, many sampling locations that were used prior to 2007 were dry and unable to be sampled. Samples from 2007-2012 were conducted in areas further downstream in the embayments. Therefore, any comparisons of the 2007-2012 data to previous results should be interpreted accordingly.

Black Bass Sampling (Spring)

Nocturnal electrofishing studies were conducted at Wolf Creek dam, and in the Harmon Creek, Fishing Creek, and Lily Creek embayments of Lake Cumberland during April 2012 to assess the black bass populations. The length-frequency and catch-per-unit-effort (CPUE) of the three black bass species collected in each area is shown in Table 2. The catch-per-hour (by area and length group) of the three black bass species are shown in Tables 3-6. Table 7 compares the catch-per-hour by length group of black bass in Lake Cumberland to other SEFD lakes sampled in 2012.

Largemouth bass catch rates met three of the four CPUE management objectives, with the CPUE of bass $\geq$20.0 in failing to meet the objective (Table 8). The spotted and smallmouth bass populations met two out of four CPUE management objectives (Tables 9 and 10, respectively).

Largemouth bass exhibited good size structure, with a PSD value of 61 and an RSD_{15} value of 21 (Table 11). Smallmouth and spotted bass had a moderate size structure, with a PSD value of 25 and an RSD_{14} value of 2 for spotted bass and a PSD value of 36 and an RSD_{14} value of 30 for smallmouth bass (Table 11). Table 12 compares the size structure values of black bass populations in Lake Cumberland to other SEFD lakes sampled in 2012.

Age-growth for largemouth bass collected during 2012 is shown in Table 13. Nine year-classes were represented, with the age-1 and age-2 year classes comprising 59% of the largemouth bass catch (Table 14). The largemouth bass population assessment score was 11 (rating=fair; Table 15).

Black Bass Sampling (Fall)

Nocturnal electrofishing was conducted in the Fishing Creek embayment during September to index the largemouth bass year class strength (Tables 16 and 17). The CPUE of age-0 largemouth bass was lower in 2012 than in 2011. Table 18 compares the CPUE of age-0 largemouth bass in Lake Cumberland to other SEFD lakes sampled in fall 2012. Relative weight (Wr) values for largemouth bass and spotted bass collected during September sampling are shown in Table 19. Table 20 compares Wr values for black bass in Lake Cumberland to other SEFD lakes sampled in fall 2012.

Walleye and White Bass Sampling

Gill nets were used in November 2012 to evaluate the walleye and white bass populations in the Jamestown/Bugwood, Conley Bottom, and Waitsboro/Burnside areas of Lake Cumberland. A total of 251 walleye were captured in 32 net-nights for a catch rate of 7.84 fish/nn. Length frequency and CPUE of walleye is shown in Table 21. Walleye ranged from 9.0-21.0 in with the mode being the 17.0 in class (57 fish). Two of the three catch rate management objectives for walleye were met (Table 22).

Age-growth data for male and female walleye are shown in Tables 23 and 24, respectively. The age-growth for both sexes combined is shown in Table 25. Seven year-classes were represented in the catch, with the 2011 year class (age-1; 39%) being most abundant (Table 26). Mean length of age-2+ walleye at capture (18.2 in) met the growth objective of 18.0 in (Table 27). The walleye assessment score was 13 (rating=good; Table 27). Relative weight (Wr) values for walleye are shown in Table 28.

A total of 48 white bass were captured in 32 net-nights for a catch rate of 1.50 fish/nn. Length frequency and CPUE of white bass is shown in Table 21. White bass ranged from 11.0-14.0 in with the mode being the 13.0 in class (33 fish). Age-growth data for white bass is shown in Table 29. The 2011 year-class was the only year-class represented in the catch (Table 30). The white bass assessment score was 7 (rating=fair; Table 31). Relative weight (Wr) values for white bass are shown in Table 32.

Striped Bass Sampling

Gill nets were used in December 2012 to evaluate the striped bass population in Lake Cumberland. Twenty net-nights captured 145 striped bass for a catch rate of 7.25 fish/nn. Length-frequency and CPUE of striped bass are shown in Table 33. Striped bass ranged from 15.0 to 27.0 in with the mode being the 23.0 in class (32 fish). Two of the four management objectives were met, with the CPUE of age-1 and older fish and fish ≥24.0 in exceeding the management objectives (Table 34). The age-growth data for striped bass collected during 2012 is shown in Table 35. Seven year-classes were represented in the catch (Table 36). The 2009 (age-3) year class was the most abundant year class collected (64%), which coincided with the increased (pulsed) stocking rate of 10.00 fish/acre in 2009. Mean length of age-2+ fish at capture (2010 year class) was 20.6 in, which did not meet the growth objective (21.0 in) for the striped bass fishery (Table 37). The striped bass assessment score was 10 (rating=good; Table 37). Striped bass relative weight (Wr) values improved in 2012 and were good for striped bass <20.0 in, although condition values decreased slightly as fish grew larger (Table 38).

Laurel River Lake (6,060 acres)

Black Bass Sampling (Spring)

Nocturnal electrofishing sampling was conducted during April 2012 to assess the black bass population in Laurel River Lake. Electrofishing was conducted in four areas of the lake: 1) dam, 2) Spruce Creek, 3) Laurel River arm, and 4) upper Craigs Creek. Length-frequency and CPUE of the three black bass species collected in each area is shown in Table 39. The catch-per-hour (by area and length group) of the three black bass species are shown in Tables 40-43. Table 7 compares the catch-per-hour by length group of black bass in Laurel River Lake to other SEFD lakes sampled in 2012.

The largemouth bass population met one of the four catch rate objectives, with the CPUE of largemouth bass ≥15.0 in exceeding the management objective (Table 44). Spotted bass met one of the four catch rate management objectives, with the catch rate of ≥14.0 in (1.67 fish/hr) exceeding the management objective (Table 45). The smallmouth bass population met two of the four catch rate management objectives, with the catch rate of bass ≥14.0 in (1.00 fish/hr) and the CPUE of ≥17.0 in fish (0.50 fish/hr) meeting the management objectives (Table 46).

Largemouth and smallmouth bass exhibited an excellent size structure, with largemouth bass having a PSD value of 61 and an RSD_{15} value of 30 and smallmouth bass having a PSD value of 89 and an RSD_{14} value of 67 (Table 47). Spotted bass exhibited good size structure, having a PSD of 41 and an RSD_{14} of 8 (Table 47). Table 12 compares the size structure values of black bass populations in Laurel River Lake to other SEFD lakes sampled in 2012.

Age-growth for spotted bass collected during 2012 is shown in Table 48. Seven year-classes were represented, with the age-2 year class comprising 37% of the spotted bass catch (Table 49). The spotted bass population assessment score was 11 (rating=fair; Table 50).

Black Bass Sampling (Fall)

Nocturnal electrofishing was conducted in the Laurel River arm during September 2012 to index largemouth bass year class strength (Tables 51 and 52). The CPUE of age-0 largemouth bass in 2012 was higher than catch rates observed over the last five years (Table 52). Relative weight (Wr) values for largemouth and spotted bass collected during September sampling are shown in Table 53.

Cedar Creek Lake (784 acres; Lincoln Co.)

Black Bass Sampling (Spring)

Nocturnal electrofishing was conducted on 16 April 2012 to assess the largemouth bass population in Cedar Creek Lake. The length-frequency and CPUE of largemouth bass is shown in Table 54. Size structure of largemouth bass was good (PSD=58, RSD_{15}=29; Table 55). The catch-per-hour (by area and length group) of largemouth bass for 2003-2012 is shown in Table 56. All of the CPUE management objectives for the largemouth bass population were exceeded (Table 57).

Black Bass Sampling (Fall)

Nocturnal electrofishing was conducted on 27 September 2012 to index the largemouth bass year-class strength (Tables 58 and 59). Catch rates of age-0 bass in 2012 were lower than rates observed in 2010 and 2011 (Table 59). Relative weight (Wr) values for largemouth bass are found in Table 60.

Bluegill/Redear Sunfish Sampling

Daytime electrofishing was conducted on 29 May 2012, in conjunction with the Black Bass Research (BBR) section, to assess the bluegill and redear sunfish populations in Cedar Creek Lake. The length-frequency and CPUE of bluegill and redear sunfish is shown in Table 61. The catch-per-hour (by size group) of bluegill and redear sunfish is shown in Table 62. PSD and RSD values for bluegill and redear sunfish are shown in Table 63.

Crappie Sampling

Fall trap netting was conducted in Cedar Creek Lake during October and November 2012 to assess the crappie population. Length frequency and CPUE for black and white crappie are shown in Table 64. The PSD and RSD_{10} values for white and black crappie are shown in Table 65. Age-growth data from white and black crappie collected in 2012 are shown in Tables 66 and 67, respectively. The white crappie collected was age-4 (Table 68). Age-2 black crappie (38%) was the most abundant year class (Table 69). Due to the low number of crappie captured, assessments were not completed for the population. Relative weight (Wr) values for black and white crappie are shown in Table 70.

Bert T. Combs Lake (36 acres; Clay Co.)

Largemouth Bass Sampling (Spring)

Nocturnal electrofishing was conducted on 27 March 2012 at Bert T. Combs Lake to assess the largemouth bass population. Length frequency and CPUE for largemouth bass is shown in Table 71. Catch-per-hour (by length group) for largemouth bass is shown in Table 72. The largemouth bass size structure was poor, with a PSD value of 26 (RSD_{15}=1; Table 73). Age-growth data from largemouth bass collected in 2012 is shown in Table 74. Ten year classes were represented in the catch, with the age-2 year class representing 46% of the total catch (Table 75). The largemouth bass assessment score was 7 (rating=poor; Table 76).

Bluegill Sampling

Daytime electrofishing was conducted on 16 May 2012 at Bert T. Combs Lake to assess the bluegill population. Length-frequency and CPUE for bluegill is shown in Table 77. Catch-per-hour (by length group) for bluegill is in Table 78. The bluegill population exhibited a fair size structure (PSD=33, RSD_8=13; Table 79). Age-growth for bluegill collected during 2012 is shown in Table 80. Five year-classes were represented in the catch, with ages 1 and 2 comprising 70% of the catch (Table 81). The bluegill population assessment score was 7 (rating=fair; Table 82).

Beulah Lake (87 acres; Jackson Co.)

Largemouth Bass Sampling (Spring)

Nocturnal electrofishing was conducted on 26 March 2012 at Beulah Lake to assess the largemouth bass population. Length frequency and CPUE for largemouth bass is shown in Table 83. Catch-per-hour (by length group) for largemouth bass is shown in Table 84. The largemouth bass size structure was poor, with a PSD value of 17 (RSD_{15}=5; Table 85).

Bluegill/Redear Sunfish Sampling

Daytime electrofishing was conducted on 21 May 2012 at Beulah Lake to assess the bluegill and redear sunfish population. Length-frequency and CPUE for bluegill and redear sunfish is shown in Table 86. Catch-per-hour (by length group) for bluegill is in Table 87. The bluegill population exhibited a poor size structure (PSD=19, RSD_8=5; Table 88). Age-growth for bluegill collected during 2012 is shown in Table 89. Seven year-classes were represented in the catch, with ages 1 and 2 comprising 74% of the catch (Table 90). The bluegill population assessment score was 7 (rating=fair; Table 91).

Cannon Creek Lake (243 acres; Bell Co.)

Black Bass Sampling (Spring)

Nocturnal electrofishing was conducted on 29 March 2012 at Cannon Creek Lake to assess the black bass population. Length frequency and CPUE for bass are shown in Table 92. The catch-per-hour (by length group) for the three bass species is shown in Table 93. Table 94 lists the PSD and RSD values for the black bass species in the lake.

Lake Linville (358 acres; Rockcastle Co.)

Black Bass Sampling (Spring)

Nocturnal electrofishing was conducted on 12 April 2012 at Lake Linville to assess the black bass population. Length frequency and CPUE for the black bass populations are shown in Tables 95-97. Two of the four catch rate management objectives were met, with the catch rates of $\geq$15.0 in and $\geq$20.0 in largemouth bass failing to meet the management objectives (Table 98). The size structure for the largemouth bass population is poor, with a PSD value of 29 (RSD_{15}=6), and the spotted bass population is also comprised of small individuals (PSD=25, RSD_{14}=3; Table 99). Age-growth for largemouth bass collected during 2012 is shown in Table 100. Nine year-classes were represented, with the age-1 and age-2 year classes comprising 51% of the largemouth bass catch (Table 101). The largemouth bass population assessment score was 12 (rating=good; Table 102).

Black Bass Sampling (Fall)

Nocturnal electrofishing was conducted on 2 October 2012 to index the largemouth bass year-class strength (Tables 103 and 104). Catch rates of age-0 largemouth bass in 2012 were slightly higher than in 2011 (Table 104).

Table 18 compares the CPUE of age-0 largemouth bass in Lake Linville to other SEFD lakes sampled in 2012. Relative weight values for largemouth bass and spotted bass are in Table 105.

Wood Creek Lake (625 acres; Laurel Co.)

Black Bass Sampling (Spring)

Nocturnal electrofishing was conducted on 23 April 2012 in the Dam, Pump Station, and Dock areas of Wood Creek Lake to assess the black bass population. Length frequency and CPUE for black bass are shown in Table 106. The size structure for largemouth bass was poor, having a PSD value of 20 (RSD_{15}=5; Table 107). The spotted bass population also had a poor size structure (PSD=17, RSD_{14}=0; Table 107). Catch-per-hour (by length group) for largemouth and spotted bass are shown in Tables 108 and 109, respectively. A largemouth bass population assessment is shown in Table 110. None of the catch rate management objectives were met for the largemouth bass population (Table 110).

Black Bass Sampling (Fall)

Nocturnal electrofishing was conducted on 25 September 2012 in the Dam, Pump Station, and Dock areas of Wood Creek Lake to index largemouth bass year class strength (Tables 111 and 112). Catch rates of age-0 largemouth bass in 2012 were higher than 2011 (Table 112). Table 18 compares the CPUE of age 0 largemouth bass in Wood Creek Lake to other SEFD lakes sampled in 2012. Relative weight values for largemouth and spotted bass are in Table 113.

Crappie Sampling

Fall trap netting was conducted in Wood Creek Lake during October 2012 to assess the crappie population. Length frequency and CPUE for black and white crappie from the lake are in Table 114. White crappie comprised 94% of the catch. The size structure for both white and black crappie indicated that the population was comprised of smaller fish as shown by the PSD and RSD_{10} values in Table 115. Age-growth data from white and black crappie collected in 2012 are shown in Tables 116 and 117, respectively. Six year classes were represented in the white crappie catch, with the age-1+ year class comprising 35% of the catch (Table 118). Four year classes of black crappie were present in the catch with the age 0 (2012) year class being the dominant year class (Table 119). The crappie population assessments (white, black, and white and black crappie combined) all rated poor (Table 120). The relative weight (Wr) values for crappie is shown in Table 121.

Table 1. Summary of sampling conditions by waterbody, species sampled, and date for the Southeastern Fisheries District in 2012.

Water body	Location	Species	Date	Time (24hr)	Gear	Weather	Water temp. F	Water level	Secchi (in)	Conditions	Pertinent sampling comments
Lake Cumberland											all 2012 samples for all species conducted under reduced water levels due to dam repairs, which altered sampling locations
	Dam	Black bass	4/10/2012	1945	shock	clear, breezy, 60s	62	684	36	good	water green, volunteer dipper
	Harmon Creek	Black bass	4/10/2012	2015	shock	clear, windy, upper 50s	62	684	42	good	open water choppy, green water but murky. Volunteer dipper
	Fishing Creek	Black bass	4/30/2012	1930	shock	cloudy, warm, 80s	75	683	36	good	slightly murky towards head of cove, volunteer dipper, storms late
	Lily Creek	Black bass	4/17/2012	2000	shock	cloudy, cool, mid 50s	66	683	24-60	good	rain on last run, water murky in upper portion, clear and greenish towards main lake
	Fishing Creek	Black bass	9/24/2012	1945	shock	clear, cool, 60s	76	684	18-24	good	
	Jamestown	Walleye/white bass	11/26-11/29		gill net	overcast and cold, breezy	53	682	-	good	
	Conley Bottom	Walleye/white bass	11/26-11/29		gill net	cool and windy, 30s	53	682	-	good	
	Waitsboro	Walleye/white bass	1/13-11/15		gill net	overcast and cool, breezy	57	683	24	good	greenish water and slightly murky
	Beaver Creek	Striped bass	12/3-12/5		gill net	partly cloudy, windy, 60s	-	682	-	fair	front moved through the area
	Lily/Wolf/Caney	Striped bass	12/3-12/5		gill net	cloudy, windy, 50-60s	55	682	-	fair	
Laurel River Lake											
	Dam	Black bass	4/9/2012	2000	shock	clear, breezy, 60s	63	1016	60-72	good	clearish green
	Spruce Creek	Black bass	4/9/2012	1930	shock	clear, 60s, windy	64	1016	54	good	water green and slightly murky, choppy and rough water, wind calming after 2000
	Craig's Creek	Black bass	4/17/2012	1930	shock	cloudy, cool, low 60s	62	1016	84	good	clearish green
	312 Bridge	Black bass	4/24/2012	1945	shock	cloudy, misty rain, 60s	62	1015	30-36	good	greenish water, slightly murky
	312 Bridge	Black bass	9/26/2012	1900	shock	clear.warm, 70s	73	1012	48	good	water dark green
Cedar Creek Lake		LMB	4/16/2012	8030	shock	mostly clear, 60s	62	full	24-36	good	water brown colored but clear
		LMB	9/27/2012	1930	shock	partly cloudy	71	normal	60	good	dark green water
		BLG/redear	5/28/2012	945	shock	overcast, light winds	81	normal	-	fair	some algae and vegetation
		Crappie	10/31-11/2		trap net	cold and windy	52	full	48	good	water greenish and slightly murky
Bert T. Combs Lake		LMB	3/27/2012	1945	shock	clear, 60s, nice	62	full	60	good	water clear, up in the trees
		BLG/redear	5/16/2012	1130	shock	sunny, warm, mid 70s	76	full	168	good	water clear and greenish
Beulah Lake		LMB	3/26/2012	1930	shock	clear, 60s and dropping	-	full	42	good	water greenish, slightly murky
		BLG/redear	5/21/2012	1030	shock	sunny, hot, increasing clouds	76	full	36	good	
Cannon Creek Lake		LMB	3/29/2012	1945	shock	partly cloudy, 70s	66	normal	84	good	water clear, greenish
Lake Linville		Black Bass	4/12/2012	1930	shock	clear, 70s	61	full	18-24	fair	murky, more turbid near bank
		Black Bass	10/2/2012	1820	shock	mostly cloudy, 60s	71	normal	-	good	water green
Wood Creek Lake		Black bass	4/23/2012	1930	shock	windy, cool, 50s	61	full	60-96	good	two crews; volunteer dippers, water clear
		Black bass	9/25/2012	2000	shock	clearing and cool, 60s	69	normal	36-48	good	two crews; heavy rains earlier in day
		Crappie	10/23-10/25	-	trap net	clear, sunny, 70s	58	full	36	good	dark green water, slightly murky

Table 2. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 6.0 hours of 15-minute nocturnal electrofishing runs for black bass in Lake Cumberland during April 2012; standard error is in parentheses.

		Inch class																				
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE
Dam	Largemouth bass						1	4	4	2	4	1	2	5	6	2	2	3	1		37	24.67 (12.45)
	Spotted bass		8	4	13	12	28	26	19	11	15	13	8	3	1						161	107.33 (20.41)
	Smallmouth bass		2	2	1	3	4	3		2		1			3	3	1				25	16.67 (3.64)
Harmon	Largemouth bass					1			4	2	1	1	2	3	1	4	2				21	14.00 (3.97)
Creek	Spotted bass	1	3	1	1	7	10	9	7	6	4	6	1								56	37.33 (3.04)
	Smallmouth bass	4	5	1			3	6	1				1		1			2			24	16.00 (4.13)
Fishing	Largemouth bass		6	5	4	7	32	28	7	4	21	22	27	34	18	11	8			1	235	156.67 (12.58)
Creek	Spotted bass		5	5					2												12	8.00 (4.00)
	Smallmouth bass																				0	0.00 (0.00)
Lily	Largemouth bass				3	10	23	24	8	7	6	7	13	13	5	1	3	2			125	83.33 (13.36)
Creek	Spotted bass	1	47	5	3	4	6	20	18	5	5	1									115	76.67 (16.63)
	Smallmouth bass		1						2												3	2.00 (0.89)
Total	Largemouth bass		6	5	7	18	56	56	23	15	32	31	44	55	30	18	15	5	1	1	418	69.67 (12.95)
	Spotted bass	2	63	15	17	23	44	55	46	22	24	20	9	3	1						344	57.33 (10.05)
	Smallmouth bass	4	8	3	1	3	7	9	3	2		1	1		4	3	1	2			52	8.67 (2.07)

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Table 3. Comparison of catch-per-hour of black bass (by area) captured during spring electrofishing on Lake Cumberland during the period of 2008-2012.

	Stock					Quality					Preferred				
Species/Area	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
Largemouth bass															
Dam	14.67	6.00	20.00	6.67	24.00	11.33	4.00	14.00	4.67	14.67	8.67	1.33	9.33	2.67	9.33
Harmon Creek	2.00	2.00	16.00	5.33	13.33	1.33	2.00	10.67	3.33	8.67	0.67	2.00	5.33	1.33	4.67
Fishing Creek	138.00	74.67	102.67	31.33	120.67	106.67	46.00	47.33	12.67	80.67	43.33	20.00	16.00	4.67	25.33
Lily Creek	42.00	22.67	52.00	18.00	59.33	33.33	14.67	25.33	14.67	29.33	19.33	9.33	12.00	6.00	7.33
Mean	49.17	26.33	47.67	15.33	54.33	38.17	16.67	24.33	8.83	33.33	18.00	8.17	10.67	3.67	11.67
Spotted bass															
Dam	86.67	34.67	46.67	36.00	82.67	35.33	14.67	23.33	19.33	26.67	12.67	2.00	2.00	1.33	2.67
Harmon Creek	32.00	22.67	40.67	18.67	28.67	4.00	7.33	10.00	0.67	7.33	0.67	0.67	0.67	0.00	0.00
Fishing Creek	26.00	6.00	14.00	8.67	1.33	3.33	2.00	2.67	0.67	0.00	0.00	0.00	0.67	0.00	0.00
Lily Creek	88.00	90.00	94.00	19.33	36.67	38.67	20.00	16.00	3.33	4.00	6.67	1.33	0.00	0.00	0.00
Mean	58.17	38.33	48.83	20.67	37.33	20.33	11.00	13.00	6.00	9.50	5.00	1.00	0.83	0.33	0.67
Smallmouth bass															
Dam	16.67	4.00	12.00	0.67	11.33	7.33	0.67	6.00	0.00	5.33	4.00	0.67	5.33	0.00	4.67
Harmon Creek	8.67	3.33	17.33	2.67	9.33	7.33	2.00	12.00	2.00	2.67	6.00	1.33	9.33	0.00	2.00
Fishing Creek	0.00	0.67	0.67	0.67	0.00	0.00	0.67	0.67	0.00	0.00	0.00	0.67	0.00	0.00	0.00
Lily Creek	2.67	3.33	4.00	1.33	1.33	0.67	0.00	0.67	1.33	0.00	0.67	0.00	0.00	0.67	0.00
Mean	7.00	2.83	8.50	1.33	5.50	3.83	0.83	4.83	0.83	2.00	2.67	0.67	3.67	0.17	1.67

Largemouth bass - ≥8.0 in = stock, ≥12.0 in = quality, ≥15.0 in = preferred.

Smallmouth bass and spotted bass - ≥7.0 in = stock, ≥11.0 in = quality, ≥14.0 in = preferred.

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Table 4. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Lake Cumberland during April 2012.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	15.33	3.78	21.00	3.73	21.67	4.86	11.67	2.38	0.17	0.17	69.67	12.95
2011	5.67	2.73	6.50	2.20	5.17	1.69	3.67	1.07	0.17	0.17	21.00	6.33
2010	12.33	2.98	23.33	5.26	13.67	3.28	10.67	2.04	0.50	0.28	60.00	11.65
2009	20.33	6.46	9.67	3.45	8.50	2.76	8.17	2.25	0.50	0.28	46.67	12.52
2008	7.33	2.33	11.00	2.84	20.17	5.73	18.00	3.96	0.17	0.17	56.50	13.17
2007	8.35	3.17	14.09	4.49	20.87	7.13	15.30	4.09	0.52	0.29	58.61	18.06
2006	0.83	0.42	6.17	2.17	8.83	3.06	10.17	2.63	0.50	0.28	26.00	7.61
2005	0.80	0.45	1.60	0.68	9.87	3.60	5.47	1.25	0.00	0.00	17.73	5.21
2004	0.80	0.30	5.20	1.46	6.93	1.38	6.53	1.59	0.00	0.00	19.50	4.00
2003	2.00	0.78	5.71	1.39	6.14	1.86	8.29	1.90	0.14	0.14	22.14	4.31
2002	0.40	0.22	1.87	0.57	7.73	2.52	6.27	0.99	0.13	0.13	16.30	3.30

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Table 5. Spring electrofishing CPUE (fish/hr) for each length group of spotted bass collected at Lake Cumberland during April 2012.

	Length group											
	<8.0 in		8.0-10.9 in		11.0-13.9 in		≥14.0 in		≥17.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	27.33	4.67	20.50	3.94	8.83	2.63	0.67	0.46	0.00	0.00	57.33	10.05
2011	8.67	1.71	12.17	2.05	5.67	2.36	0.33	0.23	0.00	0.00	26.83	4.62
2010	28.33	3.98	26.67	5.49	12.17	2.64	0.83	0.42	0.00	0.00	68.00	9.20
2009	22.67	4.28	20.50	5.14	10.00	2.11	1.00	0.43	0.00	0.00	54.17	10.25
2008	34.67	4.49	26.67	3.67	15.33	4.03	5.00	2.14	0.00	0.00	81.67	11.08
2007	27.13	6.84	27.48	4.96	13.57	3.56	6.96	2.69	0.35	0.24	75.13	13.48
2006	12.00	2.53	16.50	2.30	13.83	2.97	8.00	2.10	0.17	0.17	50.33	7.09
2005	16.27	3.59	9.47	1.40	11.20	2.02	3.07	1.15	0.00	0.00	40.00	6.29
2004	15.60	2.69	25.47	3.91	10.53	2.08	1.87	0.66	0.00	0.00	53.50	7.80
2003	32.57	5.45	31.60	3.80	9.10	1.50	2.90	0.80	0.00	0.00	76.10	8.60
2002	8.10	1.80	10.30	1.70	5.20	1.10	1.50	0.50	0.00	0.00	25.10	3.70

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Table 6. Spring electrofishing CPUE (fish/hr) for each length group of smallmouth bass collected at Lake Cumberland during April 2012.

	Length group											
	<8.0 in		8.0-10.9 in		11.0-13.9 in		≥14.0 in		≥17.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	4.33	1.44	2.33	0.72	0.33	0.23	1.67	0.68	0.50	0.28	8.67	2.07
2011	0.50	0.37	0.33	0.23	0.67	0.31	0.17	0.17	0.17	0.17	1.67	0.48
2010	2.83	0.66	2.50	0.83	1.17	0.38	3.67	1.20	2.33	0.96	10.17	1.85
2009	3.50	1.28	1.50	0.58	0.17	0.17	0.67	0.31	0.17	0.17	5.83	1.46
2008	5.17	1.79	2.00	0.80	1.17	0.51	2.67	0.95	0.83	0.42	11.00	2.76
2007	6.78	2.64	7.13	2.35	3.83	1.29	1.39	0.60	0.52	0.38	19.13	5.43
2006	2.50	0.86	1.17	0.38	0.33	0.33	0.33	0.23	0.17	0.17	4.33	1.15
2005	2.27	0.87	0.80	0.56	1.33	0.48	3.87	1.50	1.33	0.70	8.27	2.32
2004	2.93	1.83	1.87	0.87	1.20	0.51	1.33	0.65	0.00	0.00	7.33	3.10
2003	2.14	0.95	3.86	1.14	1.57	0.56	3.43	1.12	1.00	0.44	11.00	2.70
2002	2.93	1.10	3.47	1.33	2.40	0.76	0.93	0.46	0.13	0.13	9.70	2.90

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Table 7. Catch-per-hour of black bass captured during spring electrofishing on lakes in the Southeastern Fishery District during 2012.

Species/Lake	Stock*	Quality*	Preferred*
Largemouth bass			
Lake Cumberland	54.33	33.33	11.67
Laurel River Lake	60.50	37.17	18.33
Cedar Creek Lake	232.86	134.29	66.57
Bert T. Combs Lake	96.00	24.67	0.67
Beulah Lake	187.33	32.00	10.00
Cannon Creek Lake	29.50	6.50	1.50
Linville Lake	189.33	54.00	12.00
Wood Creek Lake	71.67	14.67	3.67
Spotted bass			
Lake Cumberland	37.33	9.50	0.67
Laurel River Lake	20.67	8.50	1.67
Cannon Creek Lake	35.00	4.50	0.00
Linville Lake	97.33	24.67	2.67
Wood Creek Lake	20.00	3.33	0.00
Smallmouth bass			
Lake Cumberland	5.50	2.00	1.67
Laurel River Lake	1.50	1.33	1.00
Cannon Creek Lake	7.00	4.00	0.00
Linville Lake	1.33	0.67	0.00
Wood Creek Lake	0.67	0.33	0.33

*Largemouth bass - ≥8.0 in = stock, ≥12.0 in = quality, ≥15.0 in = preferred
*Smallmouth and spotted bass - ≥7.0 in = stock, ≥11.0 in = quality, ≥14.0 in = preferred

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Table 8. Population assessment for largemouth bass based on spring electrofishing at Lake Cumberland from 1990-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age 1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Total score	Assessement rating
Management objective		≥13.0 in	≥5.00 fish/hr	≥10.00 fish/hr	≥8.00 fish/hr	≥0.50 fish/hr		
2012	Value	14.0	20.95	21.67	11.67	0.17		
	Score	4	2	2	2	1	11	F
2011	Value	13.4	6.83	5.17	3.67	0.17		
	Score	4	1	1	1	1	8	F
2010	Value	13.4	11.50	13.67	10.67	0.50		
	Score	4	1	1	2	2	10	F
2009	Value	13.4	25.67	8.50	8.17	0.50		
	Score	4	2	1	2	2	11	F
2008	Value	13.4	10.00	20.17	18.00	0.17		
	Score	4	1	2	3	1	11	F
2007	Value	13.4	10.26	20.87	15.30	0.52		
	Score	4	1	2	3	2	12	G
2006	Value	13.6	1.17	8.83	10.17	0.50		
	Score	4	1	1	2	2	10	F
2005	Value	13.6	1.20	9.90	5.50	0.00		
	Score	4	1	1	2	0	8	F
2004	Value	13.6	1.10	7.00	6.50	1.00		
	Score	4	1	1	2	2	10	F
2003	Value	13.6	3.00	6.10	8.30	0.14		
	Score	4	1	1	2	1	9	F
2002	Value	13.6	0.40	7.60	6.40	0.13		
	Score	4	1	1	2	1	9	F
2001	Value	13.5	2.90	7.70	5.20	0.27		
	Score	4	1	1	2	2	10	F
2000	Value	13.5	2.80	9.50	5.20	0.27		
	Score	4	1	1	2	2	10	F
1999	Value	13.5	9.50	13.30	11.70	0.38		
	Score	4	1	1	2	2	10	F
1997	Value	13.5	2.60	29.50	18.60	0.44		
	Score	4	1	3	3	2	13	G
1996	Value	13.5	1.70	9.60	9.60	0.46		
	Score	4	1	1	2	2	10	F
1995	Value	13.5	1.50	21.70	13.90	0.38		
	Score	4	1	2	3	2	12	G
1993	Value	13.5	1.80	20.50	4.40	0.10		
	Score	4	1	2	2	1	10	F
1992	Value	13.5	3.70	27.10	4.40	0.17		
	Score	4	1	3	2	1	11	F
1991	Value	13.5	5.70	11.80	3.90	0.13		
	Score	4	1	1	1	1	8	F
1990	Value	13.5	19.60	10.10	4.20	0.00		
	Score	4	1	1	2	0	8	F

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Table 9. Population assessment for spotted bass based on spring electrofishing at Lake Cumberland from 1990-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age 1	Spring CPUE 11.0-13.9 in	Spring CPUE ≥14.0 in	Spring CPUE ≥17.0 in	Total score	Assessement rating
Management objective		≥9.6 in	≥4.00 fish/hr	≥7.00 fish/hr	≥2.00 fish/hr	≥0.10 fish/hr		
2012	Value	11.0	14.00	8.83	0.67	0.00		
	Score	4	3	4	3	0	14	G
2011	Value	11.0	3.92	5.67	0.33	0.00		
	Score	4	2	3	3	0	12	G
2010	Value	11.0	9.67	12.17	0.83	0.00		
	Score	4	3	4	3	0	14	G
2009	Value	11.0	6.83	10.00	1.00	0.00		
	Score	4	2	4	3	0	13	G
2008	Value	11.0	8.83	15.33	5.00	0.00		
	Score	4	3	4	4	0	15	G
2007	Value	11.4	1.30	13.57	6.96	0.35		
	Score	4	2	4	4	3	17	E
2006	Value	11.4	1.83	13.83	8.00	0.17		
	Score	4	2	4	4	2	16	G
2005	Value	11.4	5.10	11.20	3.10	0.00		
	Score	4	2	4	4	0	14	G
2004	Value	11.4	6.00	10.50	1.90	0.00		
	Score	4	2	4	3	0	13	G
2003	Value	11.4	16.70	9.10	2.90	0.00		
	Score	4	3	4	4	0	15	G
2002	Value	11.4	5.10	5.20	1.50	0.00		
	Score	4	2	3	3	0	12	G
2001	Value	11.4	2.10	4.70	1.60	0.00		
	Score	4	2	3	3	0	12	G
2000	Value	11.4	1.90	5.60	1.20	0.00		
	Score	4	2	3	3	0	12	G
1999	Value	11.4	3.00	11.20	3.00	0.13		
	Score	4	2	4	4	2	16	G
1997	Value	11.4	6.00	6.70	1.90	0.00		
	Score	4	2	3	3	0	12	G
1996	Value	11.4	1.00	6.60	1.30	0.00		
	Score	4	2	3	3	0	12	G
1995	Value	11.4	1.30	2.30	0.60	0.00		
	Score	4	2	3	3	0	12	G
1993	Value	11.4	0.70	2.70	0.00	0.00		
	Score	4	1	3	0	0	8	F
1992	Value	11.4	0.70	2.70	0.40	0.00		
	Score	4	1	3	3	0	11	F
1991	Value	11.4	1.30	1.30	0.00	0.00		
	Score	4	2	2	0	0	8	F
1990	Value	11.4	3.50	1.20	0.00	0.00		
	Score	4	2	2	0	0	8	F

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Table 10. Population assessment for smallmouth bass based on spring electrofishing at Lake Cumberland from 1990-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age 1	Spring CPUE 11.0-13.9 in	Spring CPUE ≥14.0 in	Spring CPUE ≥17.0 in	Total score	Assessement rating
Management objective		≥11.0 in	≥2.00 fish/hr	≥3.00 fish/hr	≥2.00 fish/hr	≥0.50 fish/hr		
2012	Value	11.3	2.50	0.33	1.67	0.50		
	Score	3	4	2	4	4	17	E
2011	Value	11.3	0.00	0.67	0.17	0.17		
	Score	3	0	2	2	2	9	F
2010	Value	11.3	0.67	1.17	3.67	2.33		
	Score	3	2	3	4	4	16	G
2009	Value	12.2	1.83	0.17	0.67	0.17		
	Score	4	3	2	3	2	14	G
2008	Value	12.2	2.50	1.17	2.67	0.83		
	Score	4	4	3	4	4	19	E
2007	Value	12.2	2.61	3.83	1.39	0.52		
	Score	4	4	4	4	4	20	E
2006	Value	12.2	0.00	0.33	0.33	0.17		
	Score	4	0	2	2	2	10	F
2005	Value	12.2	0.80	1.30	3.90	1.33		
	Score	4	2	3	4	4	17	E
2004	Value	9.6	1.90	1.20	1.30	0.00		
	Score	2	3	3	4	0	12	G
2003	Value	9.6	1.30	1.60	3.40	1.00		
	Score	2	3	3	4	4	16	G
2002	Value	9.6	1.70	2.40	0.90	0.13		
	Score	2	3	3	3	2	13	G
2001	Value	9.6	0.50	0.40	0.90	0.53		
	Score	2	2	2	3	4	13	G
2000	Value	9.6	0.00	1.40	1.10	0.00		
	Score	2	0	3	4	0	9	F
1999	Value	9.6	0.50	2.60	2.50	0.75		
	Score	2	2	4	4	4	16	G
1997	Value	9.6	6.10	3.80	1.30	0.33		
	Score	2	4	4	4	3	17	E
1996	Value	9.6	0.10	3.20	2.50	0.80		
	Score	2	1	4	4	4	15	G
1995	Value	9.6	6.70	7.40	4.00	1.52		
	Score	2	4	4	4	4	18	E
1993	Value	9.6	0.70	2.20	1.10	0.19		
	Score	2	2	3	4	2	13	G
1992	Value	9.6	0.80	4.70	1.80	0.25		
	Score	2	2	4	4	3	15	G
1991	Value	9.6	3.20	5.50	2.30	0.76		
	Score	2	4	4	4	4	18	E
1990	Value	9.6	5.20	4.00	1.30	0.65		
	Score	2	4	4	4	4	18	E

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Table 11. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Lake Cumberland during April 2012; 95% confidence limits are in parentheses.

Area	Species	No. ≥ stock size	PSD	RSD[a]
Dam	Largemouth bass	36	61 (± 16)	39 (± 16)
	Spotted bass	124	32 (± 8)	3 (± 3)
	Smallmouth bass	17	47 (± 24)	41 (± 24)
Harmon Creek	Largemouth bass	20	65 (± 21)	35 (± 21)
	Spotted bass	43	26 (± 13)	0 (± 0)
	Smallmouth bass	14	29 (± 25)	21 (±22)
Fishing Creek	Largemouth bass	181	67 (± 7)	21 (± 6)
	Spotted bass	2	0 (± 0)	0 (± 0)
	Smallmouth bass	0	0 (± 0)	0 (± 0)
Lily Creek	Largemouth bass	89	49 (± 10)	12 (± 7)
	Spotted bass	55	11 (± 8)	0 (± 0)
	Smallmouth bass	2	0 (± 0)	0 (± 0)
Total	Largemouth bass	326	61 (± 5)	21 (± 4)
	Spotted bass	224	25 (± 6)	2 (± 2)
	Smallmouth bass	33	36 (± 17)	30 (± 16)

[a]Largemouth bass = RSD_{15}, spotted and smallmouth bass = RSD_{14}

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Table 12. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Lake Cumberland, Laurel River Lake, Cedar Creek Lake, Bert T. Combs Lake, Beulah Lake, Cannon Creek Lake, Lake Linville, and Wood Creek Lake during 2012; 95% confidence limits are in parentheses.

	Largemouth bass		Smallmouth bass		Spotted bass	
Lake	PSD	RSD_{15}	PSD	RSD_{14}	PSD	RSD_{14}
Lake Cumberland	61 (±5)	21 (±4)	36 (±17)	30 (±16)	25 (±6)	2 (±2)
Laurel River Lake	61 (±5)	30 (±5)	89 (±22)	67 (±33)	41 (±9)	8 (±5)
Cedar Creek Lake	58 (±3)	29 (±3)				
Bert T. Combs Lake	26 (±7)	1 (±1)				
Beulah Lake	17 (±4)	5 (±3)				
Cannon Creek Lake	22 (±11)	5 (±6)	57 (±27)	0 (±0)	13 (±8)	0 (±0)
Lake Linville	29 (±5)	6 (±3)	50 (±98)	0 (±0)	25 (±7)	3 (±3)
Wood Creek Lake	20 (±5)	5 (±3)			17 (±10)	0 (±0)

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Table 13. Mean back calculated lengths (in) at each annulus for largemouth bass collected from Lake Cumberland during 2012, including the 95% confidence interval (CI) for each mean length per age group.

		Age									
Year	No.	1	2	3	4	5	6	7	8	9	10
2011	44	6.8									
2010	43	6.4	10.8								
2009	20	6.9	11.8	14.0							
2008	11	5.8	11.3	14.0	15.2						
2007	4	7.4	11.7	14.0	15.3	16.1					
2006	7	5.7	11.3	14.4	15.9	16.8	17.4				
2005	2	4.3	10.0	14.5	15.8	16.5	17.0	17.3			
2004	1	5.6	11.6	13.3	13.9	14.5	15.1	15.7	16.3		
2002	1	4.9	11.2	13.8	15.8	16.8	17.5	18.1	19.1	19.4	20.1
Mean		6.5	11.2	14.1	15.4	16.4	17.1	17.1	17.7	19.4	20.1
Number		133	89	46	26	15	11	4	2	1	1
Smallest		3.2	8.0	10.6	13.1	14.5	15.1	15.7	16.3	19.4	20.1
Largest		11.4	14.9	16.5	17.9	18.1	18.8	18.6	19.1	19.4	20.1
Std error		0.2	0.2	0.2	0.2	0.3	0.4	0.7	1.4		
95% CI ±		0.3	0.3	0.4	0.5	0.6	0.8	1.4	2.8		

Otoliths were used for age-growth determinations; Intercept = 0
sedagcbl.d12

Table 14. Age-frequency and CPUE (fish/hr) of largemouth bass collected during 6.0 hours of nocturnal electrofishing at Lake Cumberland in April 2012.

	Inch class																			Std
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	20	Total	%	CPUE	error
1	6	5	7	18	56	28	4	2										126	29.9	21.00	(4.87)
2						28	19	12	32	28	4							123	29.2	20.50	(3.71)
3								2		3	31	33	15					84	20.0	14.00	(2.88)
4											9	17	9	4	6			45	10.7	7.50	(1.47)
5												6	3	4	3			16	3.8	2.67	(0.52)
6													3	4	6	4		17	4.0	2.83	(0.59)
7														4		1		5	1.2	0.83	(0.22)
8														4				4	1.0	0.67	(0.19)
10																	1	1	0.2	0.17	(0.17)
	6	5	7	18	56	56	23	16	32	31	44	56	30	20	15	5	1	421	100.0	70.17	
%	1.4	1.2	1.7	4.3	13.3	13.3	5.5	3.8	7.6	7.4	10.5	13.3	7.1	4.8	3.6	1.2	0.2	100.0			

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Table 15. Population assessment for largemouth bass collected from Lake Cumberland in April 2012 (scoring based on statewide assessment).

Parameter	Actual value	Assessment score
Mean length age-3 at capture	14.0	4
Spring CPUE age 1	20.95	2
Spring CPUE 12.0-14.9 in	21.67	2
Spring CPUE ≥15.0 in	11.67	2
Spring CPUE ≥20.0 in	0.17	1
Instantaneous mortality (Z)	0.542	
Annual mortality (A)	41.9	
Total score		11
Assessment rating		F

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Table 16. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 1.5 hours of 15-minute nocturnal electrofishing runs for black bass in Fishing Creek of Lake Cumberland on 24 September 2012; standard error is in parentheses.

	Inch class															
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total	CPUE
Largemouth bass	4	21	39	45	27	9	3	4	3	2	2	4	2	1	166	110.67 (26.51)
Spotted bass	7	2		1	3	7	3			1		1			25	16.67 (2.62)

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Table 17. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall (September and October) in electrofishing samples at Lake Cumberland.

		Age-0		Age-0		Age-0 ≥5.0 in		Age-1 [a]	
Year class	Area	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
	Lake Cumberland								
2012	Fishing Creek	6.1	0.10	96.67	24.60	80.00	19.60		
2011	Fishing Creek	6.1	0.08	114.67	25.12	102.00	23.18	46.45	6.97
2010	Fishing Creek	5.8	0.11	85.33	9.39	67.33	8.35	16.67	11.47
2009	Fishing Creek	4.8	0.16	42.00	9.45	22.67	6.42	21.33	6.59
2008	Fishing Creek	5.0	0.08	166.00	40.12	80.67	31.30	81.33	13.45
2007	Fishing Creek	5.0	0.29	4.67	3.17	2.67	1.33	24.92	5.50
2006	Fishing Creek	6.3	0.17	22.00	3.06	20.67	2.40	32.00	8.20
2005	Fishing Creek	6.2	0.16	14.00	4.47	13.30	4.09	3.33	1.23
2004	Fishing Creek	6.2	0.14	50.70	8.18	41.30	7.35	4.00	2.07
2003	Fishing Creek	5.8	0.42	6.00	2.68	4.00	2.53	1.30	0.80
2002	Fishing Creek	6.0	0.07	192.70	36.67	160.70	36.32	4.00	1.46

[a] Age-1 largemouth bass CPUE based only Fishing Creek location
sedyoycb.d12

Table 18. Year class strength at age 0 and mean lengths (in) of largemouth bass collected in September and October 2012 in electrofishing samples at Lake Cumberland, Laurel River Lake, Cedar Creek Lake, Lake Linville, and Wood Creek Lake.

		Age 0		Age 0		Age 0 ≥5.0 in	
Lake	Area	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error
Lake Cumberland	Fishing Creek	6.1	0.10	96.67	24.60	80.00	19.60
Laurel River Lake	Laurel River Arm	4.6	0.15	11.33	3.64	3.33	1.91
Cedar Creek Lake		4.0	0.19	18.29	7.55	7.14	1.79
Lake Linville		4.4	0.08	42.00	14.08	8.67	3.78
Wood Creek Lake		4.3	0.10	34.67	10.11	8.33	4.22

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sedyoywc.d12

Table 19. Number of fish and mean relative weight (Wr) for each length group of black bass collected in Fishing Creek of Lake Cumberland during 24 September 2012. Standard error is in parentheses.

Species	Length group					
	8.0-11.9 in		12.0-14.9 in		≥15.0 in	
Largemouth bass	No.	Wr	No.	Wr	No.	Wr
	19	95 (2)	8	86 (4)	3	80 (11)
	7.0-10.9 in		11.0-13.9 in		≥14.0 in	
Spotted bass	No.	Wr	No.	Wr	No.	Wr
	13	107 (2)	1	103 (-)	1	107 (-)

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Table 20. Number of fish and mean relative weight (Wr) for each length group of black bass collected in Lake Cumberland, Laurel River Lake, Cedar Creek Lake, Lake Linville, and Wood Creek Lake during September and October 2012. Standard error is in parentheses.

Species	Location	Length group					
		No.	Wr	No.	Wr	No.	Wr
Largemouth bass		8.0-11.9 in		12.0-14.9 in		≥15.0 in	
	Lake Cumberland (Fishing Creek)	19	95 (2)	8	86 (4)	3	80 (11)
	Laurel River Lake (Laurel River Arm)	15	95 (2)	9	100 (2)	2	114 (14)
	Cedar Creek Lake	159	87 (1)	103	86 (1)	60	95 (1)
	Lake Linville	121	83 (1)	32	85 (1)	13	91 (2)
	Wood Creek Lake	176	83 (1)	20	82 (1)	10	93 (3)
Spotted bass		7.0-10.9 in		11.0-13.9 in		≥14.0 in	
	Lake Cumberland (Fishing Creek)	13	107 (2)	1	103 (-)	1	107 (-)
	Laurel River Lake (Laurel River Arm)	10	101 (3)	10	105 (3)	4	111 (2)
	Lake Linville	58	85 (1)	14	84(1)	0	-
	Wood Creek Lake	43	93 (1)	8	91 (2)	0	-

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sedyoywc.d12

Table 21. Length frequency and CPUE (fish/nn) of walleye, white bass, sauger, and striped collected from the Jamestown/Bugwood (10 net-nights), Conley Bottom (10 net-nights), and Burnside/Waitsboro (12 net-nights) areas of Lake Cumberland in November 2012.

		Inch class																						
Area	Species	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	29	Total	CPUE	Std. error
Jamestown/Bugwood																								
	Walleye				1	2			5	28	30	20	12	3	1							102	10.20	1.63
	White bass						1															1	0.10	0.10
	Sauger																					0	0.00	0.00
	Striped bass	1	1	2				1		4	3	3		3	6	3	6	1	1	1		36	3.60	0.85
Conley Bottom																								
	Walleye		3	6	7			3	12	14	17	4	1									67	6.70	0.90
	White bass					8	16	1														25	2.50	0.81
	Sauger																					0	0.00	0.00
	Striped bass		1	2				1		1				1	1	4		1	1			13	1.30	0.26
Burnside/Waitsboro																								
	Walleye		1	12	14	4	1	5	10	13	10	4	5	1	2							82	6.83	1.09
	White bass				2	4	16															22	1.83	0.63
	Sauger					1		1				1										3	0.25	0.13
	Striped bass	6	22	36	1					2	3	1		1	4	14	5	7	1		1	104	8.67	1.70
Total																								
	Walleye		4	18	22	6	1	8	27	55	57	28	18	4	3							251	7.84	0.74
	White bass				2	12	33	1														48	1.50	0.38
	Sauger					1		1				1										3	0.09	0.05
	Striped bass	7	24	40	1			2		7	6	4		5	11	21	11	9	3	1	1	153	4.78	0.88

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Table 22. Population assessment for walleye based on fall gill netting at Lake Cumberland from 1991-2012 (scoring based on statewide assessment).

Year		Parameters: CPUE ≥ age 1+	Mean length age 2+ at capture	CPUE ≥ 20.0 in	CPUE age 1+	Total score	Assessment rating
Management objective		≥ 6.00 fish/nn	≥ 18.0 in	≥ 1.50 fish/nn	≥ 3.00 fish/nn		
2012	Value	6.28	18.2	0.22	3.06		
	Score	4	4	1	4	13	G
2010	Value	3.28	17.6	0.09	1.94		
	Score	2	3	1	2	8	F
2008	Value	5.90	18.5	0.87	2.48		
	Score	3	4	2	3	12	G
2006	Value	14.80	19.1	3.90	3.10		
	Score	4	4	4	4	16	E
2004	Value	8.85	18.8	1.80	4.55		
	Score	4	4	3	4	15	E
2002	Value	12.14	19.1	2.48	6.38		
	Score	4	4	4	4	16	E
2000	Value	4.30	18.6	1.50	1.60		
	Score	3	4	3	2	12	G
1998	Value	7.93	18.5	2.40	1.90		
	Score	4	4	4	2	14	E
1996	Value	5.32	18.5	0.90	3.64		
	Score	3	4	2	4	13	G
1994	Value	3.46	18.5	0.90	0.67		
	Score	2	4	2	1	9	F
1991	Value	5.10	18.5*	0.18	2.70		
	Score	3	4	1	3	11	G

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* Data from 1994 used for age-growth

Table 23. Mean back calculated lengths (in) at each annulus for male walleye collected from Lake Cumberland during 2012, including the 95% confidence interval (CI) for each mean length per age group.

		Age						
Year	No.	1	2	3	4	5	6	7
2011	19	11.4						
2010	16	12.0	15.9					
2009	14	11.7	15.5	17.2				
2008	4	11.7	15.8	17.5	18.4			
2006	1	10.5	15.8	17.8	19.1	19.9	20.7	
2005	1	11.9	15.6	17.4	18.5	18.9	19.7	20.0
Mean		11.7	15.7	17.3	18.5	19.4	20.2	20.0
Number		55	36	20	6	2	2	1
Smallest		9.5	13.3	15.2	16.6	18.9	19.7	20.0
Largest		13.6	17.1	19.4	19.1	19.9	20.7	20.0
Std error		0.1	0.1	0.2	0.4	0.5	0.5	
95% CI ±		0.3	0.3	0.5	0.8	0.9	1.0	

Otoliths were used for age-growth determinations; Intercept = 0
sedagcwm.d12

Table 24. Mean back calculated lengths (in) at each annulus for female walleye collected from Lake Cumberland during 2012, including the 95% confidence interval (CI) for each mean length per age group.

		Age			
Year	No.	1	2	3	4
2010	5	12.2	16.6		
2009	3	13.0	16.8	18.6	
2008	2	12.0	15.9	18.2	20.0
Mean		12.4	16.5	18.5	20.0
Number		10	10	5	2
Smallest		10.3	14.5	17.4	19.4
Largest		14.0	17.6	19.2	20.6
Std error		0.3	0.3	0.4	0.6
95% CI ±		0.6	0.6	0.7	1.2

Otoliths were used for age-growth determinations; Intercept = 0
sedagcwf.d12

Table 25. Mean back calculated lengths (in) at each annulus for walleye (both sexes) collected from Lake Cumberland during 2012, including the 95% confidence interval (CI) for each mean length per age group.

		Age						
Year	No.	1	2	3	4	5	6	7
2011	33	11.5						
2010	21	12.1	16.1					
2009	17	11.9	15.8	17.5				
2008	6	11.8	15.8	17.7	18.9			
2006	1	10.5	15.8	17.8	19.1	19.9	20.7	
2005	1	11.9	15.6	17.4	18.5	18.9	19.7	20.0
Mean		11.8	15.9	17.6	18.9	19.4	20.2	20.0
Number		79	46	25	8	2	2	1
Smallest		9.3	13.3	15.2	16.6	18.9	19.7	20.0
Largest		14.0	17.6	19.4	20.6	19.9	20.7	20.0
Std error		0.1	0.1	0.2	0.4	0.5	0.5	
95% CI ±		0.3	0.3	0.5	0.8	0.9	1.0	

Otoliths were used for age-growth determinations; Intercept = 0
sedagcbw.d12

Table 26. Age-frequency and CPUE (fish/nn) of walleye gill netting for 32 net-nights at Lake Cumberland during November 2012. Standard error is in parentheses.

	Inch class																
Age	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	%	CPUE	
0	4	18	22	6										50	19.9	1.56	(0.34)
1					1	8	27	34	26	2				98	39.0	3.06	(0.36)
2								13	18	17	7			55	21.9	1.72	(0.24)
3								8	9	9	8	2		36	14.3	1.13	(0.18)
4									4		3	1	2	10	4.0	0.31	(0.06)
6													1	1	0.4	0.03	(0.02)
7												1		1	0.4	0.03	(0.02)
Total	4	18	22	6	1	8	27	55	57	28	18	4	3	251	100.0	7.84	
%	1.6	7.2	8.8	2.4	0.4	3.2	10.8	21.9	22.7	11.2	7.2	1.6	1.2				

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Table 27. Walleye population assessment for walleye gill netted at Lake Cumberland in November 2012 (scoring based on statewide assessment).

Parameter	Actual value	Assessment score
Population density (CPUE age 1 and older)	6.28	4
Growth rate (Mean length age 2+ at capture)	18.2	4
Size structure (CPUE ≥20.0 in)	0.22	1
Recruitment (CPUE age 1)	3.06	4
Instantaneous mortality (Z)	0.850	
Annual mortality (A)	57.3	
Total score		13
Assessment rating		G

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Table 28. Number of fish and mean relative weight (Wr) for each length group of walleye collected in Lake Cumberland during November 2012. Standard error is in parentheses.

Length group					
10.0-14.9 in		15.0-19.9 in		≥20.0 in	
No.	Wr	No.	Wr	No.	Wr
55	92 (1)	182	92 (0)	7	88 (1)

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Table 29. Mean back calculated lengths (in) at each annulus for white bass collected from Lake Cumberland during 2012, including the 95% confidence interval (CI) for each mean length per age group.

Year	No.	Age 1
2011	30	9.9
Mean		9.9
Number		30
Smallest		8.1
Largest		11.4
Std error		0.2
95% CI ±		0.3

Otoliths were used for age-growth determinations; Intercept = 0
sedagcwb.d12

Table 30. Age-frequency and CPUE (fish/nn) of white bass collected during gill netting for 32 net-nights at Lake Cumberland during November 2012. Standard error is in parentheses.

	Inch class							
Age	11	12	13	14	Total	%	CPUE	
1+	2	12	33	1	48	100.0	1.50	(0.38)
Total	2	12	33	1	48	100.0	1.50	
%	4.2	25.0	68.8	2.1				

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sedagcwb.d12

Table 31. Population assessment for white bass collected from Lake Cumberland in November 2012 (scoring based on statewide assessment).

Parameter	Actual value	Assessmen score
CPUE age-1 and older	1.50	1
Mean length age-2+ at capture	13.6 *	4
CPUE ≥12.0 in	1.44	1
CPUE age 1	1.50	1
Instantaneous mortality (Z)	-	
Annual mortality (A)	-	
Total score		7
Assessment rating		F

* 2010 data used for assessment

sedgncbw.d12
sedagcwb.d12

Table 32. Number of fish and mean relative weight (Wr) for each length group of white bass collected in Lake Cumberland during November 2012. Standard error is in parentheses.

Length group					
6.0-8.9 in		9.0-11.9 in		≥12.0 in	
No.	Wr	No.	Wr	No.	Wr
0	0 (0)	2	92 (2)	34	104 (1)

sedgncbw.d12

Table 33. Length frequency and CPUE (fish/nn) of striped bass collected at Lake Cumberland in 20 net-nights on 4-5 December 2012.

Species	Inch class													Total	CPUE	Std. error
	15	16	17	18	19	20	21	22	23	24	25	26	27			
Striped bass	1	3	6	4	3	7	27	25	32	23	10	2	2	145	7.25	1.34

sedgncbs.d12

Table 34. Population assessment for striped bass based on fall gill netting at Lake Cumberland from 1994-2012.

Year		CPUE ≥age 1	Mean length age 2 at capture	CPUE ≥24.0 in	CPUE age-1	Total score	Assessement rating
Management objective		≥4.00 fish/nn	≥21.0 in	≥1.00 fish/nn	≥2.00 fish/nn		
2012	Value	7.25	20.6	1.85	0.75		
	Score	4	2	3	1	10	G
2011	Value	5.93	20.5	1.17	0.57		
	Score	3	2	3	1	9	F
2009	Value	4.00	21.6	1.20	1.77		
	Score	3	3	3	2	11	G
2008	Value	9.15	22.1	1.50	2.70		
	Score	4	4	3	3	14	E
2007	Value	5.27	23.7	1.23	3.87		
	Score	3	4	3	4	14	E
2006	Value	3.90	22.8	1.60	1.30		
	Score	2	4	3	2	11	G
2005	Value	3.40	23.3	1.50	1.20		
	Score	2	4	3	2	11	G
2004	Value	4.40	23.4	2.10	1.80		
	Score	3	4	4	2	13	G
2003	Value	4.10	21.9	1.20	1.70		
	Score	3	3	3	2	11	G
2002	Value	3.50	22.9	1.25	1.80		
	Score	2	4	3	2	11	G
2001	Value	3.10	21.0	0.11	2.70		
	Score	2	3	1	3	9	F
2000	Value	3.40	23.3	0.70	2.50		
	Score	2	4	2	3	11	G
1999	Value	3.40	22.4	0.30	2.70		
	Score	2	4	1	3	10	G
1998	Value	5.30	21.5	0.40	4.80		
	Score	3	3	1	4	11	G
1997	Value	1.90	21.5	1.10	0.40		
	Score	1	3	3	1	8	F
1996	Value	2.70	22.2	0.90	1.00		
	Score	2	4	2	2	10	G
1995	Value	3.50	22.7	1.50	1.50		
	Score	2	4	3	2	11	G
1994	Value	4.30	21.7	0.80	2.70		
	Score	3	3	2	3	11	G

sedgncbs.d12

Table 35. Mean back calculated lengths (in) at each annulus for striped bass collected from Lake Cumberland during 2012, including the 95% confidence interval (CI) for each mean length per age group.

		Age							
Year	No.	1	2	3	4	5	6	7	8
2011	31	10.5							
2010	15	10.7	17.2						
2009	49	11.8	18.1	21.1					
2008	16	11.2	18.2	22.0	24.0				
2007	1	12.8	18.0	20.4	22.3	24.3			
2006	3	10.4	18.3	22.4	24.6	25.9	26.7		
2004	1	9.3	18.3	22.8	24.9	25.6	26.3	26.6	27.0
Mean		11.2	17.9	21.3	24.0	25.5	26.6	26.6	27.0
Number		116	85	70	21	5	4	1	1
Smallest		7.0	15.3	18.5	22.3	24.3	25.1	26.6	27.0
Largest		14.4	20.5	24.0	26.3	27.5	28.3	26.6	27.0
Std error		0.2	0.1	0.1	0.2	0.6	0.7		
95% CI ±		0.3	0.3	0.3	0.4	1.1	1.3		

Otoliths were used for age-growth determinations; Intercept = 0
sedagcbs.d12

Table 36. Age-frequency and CPUE (fish/nn) of striped bass gill netted for 20 net-nights at Lake Cumberland in December 2012. Standard error is in parentheses.

	Inch class																
Age	15	16	17	18	19	20	21	22	23	24	25	26	27	Total	%	CPUE	
1+	1	3	6	4	1									15	10.3	0.75	(0.37)
2+					2	5	6	2						15	10.3	0.75	(0.23)
3+						2	21	23	32	15	1			94	64.4	4.70	(0.79)
4+										7	9	1		17	11.6	0.85	(0.23)
5+										2				2	1.4	0.10	(0.03)
6+												1	1	2	1.4	0.10	(0.05)
8+													1	1	0.7	0.05	(0.03)
Total	1	3	6	4	3	7	27	25	32	24	10	2	2	146	100.0	7.30	
%	0.7	2.1	4.1	2.7	2.1	4.8	18.5	17.1	21.9	16.4	6.8	1.4	1.4				

sedgncbs.d12
sedagcbs.d12

Table 37. Striped bass population assessment for striped bass gill netted at Lake Cumberland in December 2012 (scoring based on statewide assessment).

Parameter	Actual value	Assessment score
Population density (CPUE age 1 and older)	7.25	4
Growth rate (Mean length age 2+ at capture)	20.6	2
Size structure (CPUE ≥24.0 in)	1.85	3
Recruitment (CPUE age 1)	0.75	1
Instantaneous mortality (Z)	0.439	
Annual mortality (A)	35.5	
Total score		10
Assessment rating		G

sedgncbs.d12
sedagcbs.d12

Table 38. Number of fish and mean relative weight (Wr) for each length group of striped bass collected in Lake Cumberland in November and December 2012. Standard error is in parentheses.

Length group					
12.0-19.9 in		20.0-29.9 in		≥30.0 in	
No.	Wr	No.	Wr	No.	Wr
35	94 (1)	180	89 (1)	0	-

sedgncbs.d12
sedgncbw.d12

Table 39. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 6.00 hours of 15-minute nocturnal electrofishing runs for black bass in Laurel River Lake during April 2012; standard error is in parentheses.

		Inch class																					
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Dam	Largemouth bass				1	4	7	7	9	11	5	2	11	11	12	5	3	1	1	1		91	60.67 (10.40)
	Spotted bass					1	3	6	3	2	1	3	5	2	1	1						28	18.67 (4.22)
	Smallmouth bass					1							1		1		1				1	5	3.33 (1.91)
Spruce	Largemouth bass		2	3			2	2	2	3	5	2	3	7	10	8	6					55	36.67 (8.09)
Creek	Spotted bass	1	1			1	5	1	2	1		6	8	5								31	20.67 (4.06)
	Smallmouth bass									1					2			1				4	2.67 (1.33)
Laurel	Largemouth bass		3		1	5	1	7	12	21	22	16	14	21	12	10	8	7	4			164	109.33 (11.30)
River	Spotted bass	1					6	5	8	3	1	1	1		1							27	18.00 (4.23)
Arm	Smallmouth bass																					0	0.00 (0.00)
Upper	Largemouth bass					1	6	6	12	13	3	4	9	13	11	6	4		1			89	59.33 (14.14)
Craigs	Spotted bass				3	7	9	9	3	7	2	9	4									53	35.33 (10.40)
Creek	Smallmouth bass					1					1											2	1.33 (0.84)
Total	Largemouth bass		5	3	2	10	16	22	35	48	35	24	37	52	45	29	21	8	6	1		399	66.50 (7.60)
	Spotted bass	2	1		3	9	23	21	16	13	4	19	18	7	2	1						139	23.17 (3.30)
	Smallmouth bass					2				1	1		1		3		1	1			1	11	1.83 (0.64)

sedpsdlr.d12

Table 40. Comparison of catch-per-hour of black bass (by area) captured during spring electrofishing on Laurel River Lake during the period of 2008-2012.

	Stock					Quality					Preferred				
Species/Area	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
Largemouth bass															
Dam	29.33	57.33	70.67	33.33	52.67	19.33	39.33	46.00	15.33	31.33	13.33	27.33	21.33	6.67	15.33
Spruce Creek	59.33	34.00	80.67	50.67	32.00	34.67	32.00	58.00	45.33	24.00	26.67	16.67	28.67	25.33	16.00
Laurel River Arm	52.67	84.00	87.33	102.00	102.67	37.33	62.67	47.33	74.00	61.33	24.00	35.33	25.33	32.67	27.33
Craigs Cr. headwaters	20.67	24.00	52.67	80.00	54.67	10.67	16.67	16.00	52.00	32.00	6.67	4.00	9.33	15.33	14.67
Mean	40.50	49.83	72.83	66.50	60.50	25.50	37.67	41.83	46.67	37.17	17.67	20.83	21.17	20.00	18.33
Spotted bass															
Dam	20.67	30.67	34.67	16.00	18.00	5.33	16.67	24.67	8.00	8.67	1.33	6.00	8.67	3.33	2.67
Spruce Creek	14.00	5.33	22.67	18.00	18.67	9.33	2.00	10.00	11.33	12.67	3.33	0.00	6.67	2.67	3.33
Laurel River Arm	60.00	22.00	39.33	15.33	17.33	14.00	8.67	7.33	2.00	2.67	1.33	2.00	1.33	0.00	0.67
Craigs Cr. headwaters	34.00	38.67	44.00	38.67	28.67	14.67	10.67	13.33	16.67	10.00	3.33	2.67	2.67	2.00	0.00
Mean	32.17	24.17	35.17	22.00	20.67	10.83	9.50	13.83	9.50	8.50	2.33	2.67	4.83	2.00	1.67
Smallmouth bass															
Dam	11.33	17.33	16.67	2.00	2.67	6.67	12.00	8.00	0.00	2.67	3.33	10.67	6.00	0.00	2.00
Spruce Creek	13.33	4.67	8.00	6.00	2.67	11.33	3.33	4.67	2.67	2.00	9.33	3.33	4.00	2.00	2.00
Laurel River Arm	0.00	0.00	1.33	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Craigs Cr. headwaters	0.67	2.00	1.33	4.67	0.67	0.00	1.33	1.33	2.67	0.67	0.00	0.00	1.33	1.33	0.00
Mean	6.33	6.00	6.83	3.50	1.50	4.50	4.17	3.50	1.33	1.33	3.17	3.50	2.83	0.83	1.00

Largemouth bass - ≥8.0 in = stock, ≥12.0 in = quality, ≥15.0 in = preferred.

Smallmouth bass and spotted bass - ≥7.0 in = stock, ≥11.0 in = quality, ≥14.0 in = preferred.

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Table 41. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Laurel River Lake during April 2012.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	6.00	1.23	23.33	3.64	18.83	2.94	18.33	1.98	0.17	0.17	66.50	7.60
2011	11.50	3.71	19.83	4.07	26.67	4.65	20.00	2.94	0.83	0.34	78.00	11.57
2010	15.83	2.98	31.00	4.37	20.67	3.11	21.17	2.44	0.83	0.42	88.67	8.39
2009	13.17	2.44	12.17	2.74	16.83	2.59	20.83	3.20	0.83	0.54	63.00	8.54
2008	37.50	11.53	15.00	1.97	7.83	1.47	17.67	2.66	0.67	0.46	78.00	13.81
2007	2.33	0.80	7.83	1.93	14.50	1.86	21.83	2.55	0.50	0.28	46.50	4.03
2006	20.80	5.65	13.92	2.72	17.12	2.86	19.52	2.76	0.64	0.30	71.36	11.44
2005	6.17	1.23	15.00	2.85	18.50	2.67	22.50	2.90	0.17	0.17	62.17	7.54
2004	3.80	1.50	11.00	1.40	18.50	3.00	14.20	1.90	0.00	0.00	47.50	4.80
2003	9.80	2.90	37.00	5.80	29.30	4.10	13.80	2.00	0.00	0.00	90.00	12.30
2002	21.70	5.00	24.00	3.80	23.30	3.30	8.30	1.40	0.00	0.00	77.30	9.70

sedpsdlr.d12

Table 42. Spring electrofishing CPUE (fish/hr) for each length group of spotted bass collected at Laurel River Lake during April 2012.

	Length group											
	<8.0 in		8.0-10.9 in		11.0-13.9 in		≥14.0 in		≥17.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	6.33	1.56	8.33	1.75	6.83	1.55	1.67	0.53	0.00	0.00	23.17	3.30
2011	7.33	1.44	9.17	1.33	7.50	1.71	2.00	0.54	0.00	0.00	26.00	3.52
2010	25.17	4.21	13.00	2.27	9.00	2.00	4.83	1.18	0.00	0.00	52.00	6.12
2009	6.50	1.50	12.50	2.38	6.83	1.45	2.67	0.79	0.17	0.17	28.50	4.56
2008	20.17	4.23	12.67	2.63	8.50	1.43	2.33	0.63	0.00	0.00	43.67	6.99
2007	12.17	2.32	13.50	2.15	10.67	1.71	2.00	0.64	0.00	0.00	38.33	4.04
2006	15.04	2.39	13.44	1.74	9.12	1.74	2.56	0.73	0.00	0.00	40.16	4.55
2005	4.83	0.83	3.33	0.79	7.67	1.60	3.67	1.13	0.00	0.00	19.50	2.65
2004	3.20	1.00	12.50	2.90	9.80	2.30	2.20	0.70	0.00	0.00	27.70	5.60
2003	23.30	5.30	17.80	3.10	10.20	2.00	0.80	0.50	0.00	0.00	52.20	8.90
2002	13.70	3.20	13.30	1.80	5.50	1.40	0.30	0.20	0.00	0.00	32.80	5.60

sedpsdlr.d12

Table 43. Spring electrofishing CPUE (fish/hr) for each length group of smallmouth bass collected at Laurel River Lake during April 2012.

	Length group											
	<8.0 in		8.0-10.9 in		11.0-13.9 in		≥14.0 in		≥17.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	0.33	0.23	0.17	0.17	0.33	0.23	1.00	0.43	0.50	0.28	1.83	0.64
2011	1.00	0.43	1.67	0.53	0.50	0.28	0.83	0.42	0.67	0.31	4.00	1.05
2010	10.17	2.15	1.17	0.45	0.67	0.39	2.83	0.74	1.17	0.38	14.83	2.95
2009	1.67	1.18	1.00	0.36	0.67	0.39	3.50	1.45	1.83	0.80	6.83	2.38
2008	1.67	0.68	1.83	0.72	1.33	0.52	3.17	1.23	1.83	0.64	8.00	2.28
2007	2.83	0.78	1.67	0.68	0.33	0.23	1.17	0.45	0.83	0.42	6.00	1.36
2006	0.48	0.27	0.48	0.35	0.16	0.16	0.96	0.58	0.32	0.22	2.08	0.96
2005	0.17	0.17	0.83	0.42	1.50	0.63	5.50	1.46	2.83	1.09	8.00	1.83
2004	2.00	0.60	1.20	0.40	0.70	0.40	1.20	0.50	0.00	0.00	5.00	1.10
2003	8.30	2.20	7.50	1.80	1.80	0.80	2.20	0.80	0.17	0.17	19.80	4.30
2002	8.20	2.50	4.50	1.50	2.20	0.60	0.70	0.30	0.17	0.17	15.50	3.80

sedpsdlr.d12

Table 44. Population assessment for largemouth bass based on spring electrofishing at Laurel River Lake from 1990-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age 1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Total score	Assessement rating
Management objective		≥13.0 in	≥10.00 fish/hr	≥20.00 fish/hr	≥10.00 fish/hr	≥0.50 fish/hr		
2012	Value	13.3	3.33	18.83	18.33	0.17		
	Score	4	1	2	3	1	11	F
2011	Value	13.3	9.21	26.67	20.00	0.83		
	Score	4	1	3	4	2	14	G
2010	Value	13.3	6.50	20.67	21.17	0.83		
	Score	4	1	2	4	2	13	G
2009	Value	13.3	12.17	16.83	20.83	0.83		
	Score	4	1	2	4	2	13	G
2008	Value	13.3	36.33	7.83	17.67	0.67		
	Score	4	3	1	3	2	13	G
2007	Value	13.7	2.08	14.50	21.83	0.50		
	Score	4	1	1	4	2	12	G
2006	Value	13.7	18.40	17.12	19.52	0.64		
	Score	4	1	2	3	2	12	G
2005	Value	13.7	4.61	18.50	22.50	0.17		
	Score	4	1	2	4	1	12	G
2004	Value	13.7	2.61	18.50	14.17	0.00		
	Score	4	1	2	3	0	10	F
2003	Value	13.7	7.80	29.33	13.83	0.00		
	Score	4	1	3	3	0	11	F
2002	Value	13.7	18.19	23.33	8.83	0.00		
	Score	4	1	2	2	0	9	F
2001	Value	13.7	17.82	22.13	2.53	0.27		
	Score	4	1	2	1	2	10	F
2000	Value	13.7	2.30	16.29	2.14	0.14		
	Score	4	1	2	1	1	9	F
1999	Value	13.7	8.24	26.00	6.40	0.53		
	Score	4	1	3	2	2	12	G
1998	Value	13.7	5.96	9.17	7.83	1.50		
	Score	4	1	1	2	2	10	F
1997	Value	13.7	14.51	25.38	6.21	0.69		
	Score	4	1	3	2	2	12	G
1996	Value	13.7	8.71	15.43	6.57	0.86		
	Score	4	1	2	2	2	11	F
1995	Value	13.7	1.21	9.33	6.13	1.07		
	Score	4	1	1	2	2	10	F
1994	Value	13.7	5.70	13.86	7.00	1.29		
	Score	4	1	1	2	2	10	F
1993	Value	13.7	5.98	11.41	6.52	1.33		
	Score	4	1	1	2	2	10	F
1992	Value	13.7	9.10	24.42	8.75	1.31		
	Score	4	1	2	2	2	11	F
1991	Value	13.7	22.10	11.60	4.71	0.00		
	Score	4	2	1	2	0	9	F
1990	Value	13.7	17.52	10.20	4.90	1.10		
	Score	4	1	1	2	2	10	F

sedpsdlr.d12

Table 45. Population assessment for spotted bass based on spring electrofishing at Laurel River Lake from 1990-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age 1	Spring CPUE 11.0-13.9 in	Spring CPUE ≥14.0 in	Spring CPUE ≥17.0 in	Total score	Assessement rating
Management objective		≥11.0 in	≥3.00 fish/hr	≥7.00 fish/hr	≥1.00 fish/hr	≥0.10 fish/hr		
2012	Value	10.0	0.50	6.83	1.67	0.00		
	Score	4	1	3	3	0	11	F
2011	Value	10.4	0.83	7.50	2.00	0.00		
	Score	4	1	4	4	0	13	G
2010	Value	10.4	2.50	9.00	4.83	0.00		
	Score	4	2	4	4	0	14	G
2009	Value	10.4	0.33	6.83	2.67	0.17		
	Score	4	1	3	4	2	14	G
2008	Value	10.4	4.00	8.50	2.33	0.00		
	Score	4	2	4	4	0	14	G
2007	Value	10.4	0.83	10.67	2.00	0.00		
	Score	4	1	4	4	0	13	G
2006	Value	11.5	4.25	9.12	2.56	0.00		
	Score	4	2	4	4	0	14	G
2005	Value	11.5	1.52	7.67	3.67	0.00		
	Score	4	2	4	4	0	14	G
2004	Value	11.5	0.00	9.83	2.17	0.00		
	Score	4	0	4	4	0	12	G
2003	Value	11.5	2.26	10.17	0.83	0.00		
	Score	4	2	4	3	0	13	G
2002	Value	11.5	2.19	5.50	0.33	0.00		
	Score	4	2	3	3	0	12	G
2001	Value	11.5	5.96	8.27	0.13	0.00		
	Score	4	2	4	2	0	12	G
2000	Value	11.5	2.55	2.29	0.14	0.00		
	Score	4	2	3	2	0	11	F
1999	Value	11.5	1.54	5.60	0.40	0.00		
	Score	4	2	3	3	0	12	G
1998	Value	11.5	6.64	4.83	0.33	0.00		
	Score	4	2	3	3	0	12	G
1997	Value	11.5	1.64	7.45	0.69	0.00		
	Score	4	2	4	3	0	13	G
1996	Value	11.5	0.29	7.86	0.71	0.00		
	Score	4	1	4	3	0	12	G
1995	Value	11.5	1.18	9.87	0.00	0.00		
	Score	4	2	4	0	0	10	F
1994	Value	11.5	4.76	5.43	1.43	0.00		
	Score	4	2	3	3	0	12	G
1993	Value	11.5	1.21	5.33	0.59	0.15		
	Score	4	2	3	3	2	14	G
1992	Value	11.5	3.36	13.22	0.99	0.00		
	Score	4	2	4	3	0	13	G
1991	Value	11.5	3.99	12.68	0.00	0.00		
	Score	4	2	4	0	0	10	F
1990	Value	11.5	6.74	3.23	2.43	0.00		
	Score	4	2	3	4	0	13	G

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Table 46. Population assessment for smallmouth bass based on spring electrofishing at Laurel River Lake from 1990-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age 1	Spring CPUE 11.0-13.9 in	Spring CPUE ≥14.0 in	Spring CPUE ≥17.0 in	Total score	Assessement rating
Management objective		≥13.0 in	≥3.00 fish/hr	≥1.5 fish/hr	≥1.00 fish/hr	≥0.50 fish/hr		
2012	Value	13.6	0.00	0.33	1.00	0.50		
	Score	4	0	2	4	4	14	G
2011	Value	13.6	0.33	0.50	0.83	0.67		
	Score	4	2	2	3	4	15	G
2010	Value	13.6	3.83	0.67	2.83	1.17		
	Score	4	4	2	4	4	18	E
2009	Value	13.6	0.33	0.67	3.50	1.83		
	Score	4	2	2	4	4	16	G
2008	Value	13.6	0.83	1.33	3.17	1.83		
	Score	4	2	3	4	4	17	E
2007	Value	13.6	1.20	0.33	1.17	0.83		
	Score	4	3	2	4	4	17	E
2006	Value	13.6	0.38	0.16	0.96	0.32		
	Score	4	2	2	3	3	14	G
2005	Value	13.6	0.06	1.50	5.50	2.83		
	Score	4	1	3	4	4	16	G
2004	Value	13.6	0.40	0.67	1.17	0.00		
	Score	4	2	2	4	0	12	G
2003	Value	13.6	4.00	1.83	2.17	0.17		
	Score	4	4	3	4	2	17	E
2002	Value	13.6	6.04	2.17	0.67	0.17		
	Score	4	4	3	3	2	16	G
2001	Value	13.6	3.40	2.80	1.07	0.00		
	Score	4	4	4	4	0	16	G
2000	Value	13.6	0.88	1.29	0.57	0.14		
	Score	4	2	3	3	2	14	G
1999	Value	13.6	2.12	1.87	0.53	0.13		
	Score	4	3	3	3	2	15	G
1998	Value	13.6	12.67	0.67	0.67	0.50		
	Score	4	4	2	3	4	17	E
1997	Value	13.6	6.67	2.07	1.52	0.14		
	Score	4	4	3	4	2	17	E
1996	Value	13.6	0.14	2.86	0.43	0.00		
	Score	4	1	4	3	0	12	G
1995	Value	13.6	1.20	0.53	1.07	0.27		
	Score	4	3	2	4	3	16	G
1994	Value	13.6	3.36	1.29	0.71	0.29		
	Score	4	4	3	3	3	17	E
1993	Value	13.6	1.57	0.59	0.44	0.30		
	Score	4	3	2	3	3	15	G
1992	Value	13.6	1.89	1.47	0.15	0.00		
	Score	4	3	3	2	0	12	G
1991	Value	13.6	0.36	0.36	0.00	0.00		
	Score	4	2	2	0	0	8	F
1990	Value	13.6	8.63	1.35	1.35	0.54		
	Score	4	4	3	4	4	19	E

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Table 47. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Laurel River Lake during April 2012; 95% confidence limits are in parentheses.

Area	Species	No. ≥ stock size	PSD	RSD[a]
Dam				
	Largemouth bass	79	59 (± 11)	29 (± 10)
	Spotted bass	27	48 (± 19)	15 (± 14)
	Smallmouth bass	4	100 (± 0)	75 (± 49)
Spruce Creek				
	Largemouth bass	48	75 (± 12)	50 (± 14)
	Spotted bass	28	68 (± 18)	18 (± 14)
	Smallmouth bass	4	75 (± 49)	75 (± 49)
Laurel River Arm				
	Largemouth bass	154	60 (± 8)	27 (± 7)
	Spotted bass	26	15 (± 14)	4 (± 8)
	Smallmouth bass	0	0 (± 0)	0 (± 0)
Upper Craigs Creek				
	Largemouth bass	82	59 (± 11)	27 (± 10)
	Spotted bass	43	35 (± 14)	0 (± 0)
	Smallmouth bass	1	100 (± 0)	0 (± 0)
Total				
	Largemouth bass	363	61 (± 5)	30 (± 5)
	Spotted bass	124	41 (± 9)	8 (± 5)
	Smallmouth bass	9	89 (± 22)	67 (± 33)

[a]Largemouth bass = RSD_{15}, spotted and smallmouth bass = RSD_{14}

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Table 48 Mean back calculated lengths (in) at each annulus for spotted bass collected from Laurel River Lake during 2012, including the 95% confidence interval (CI) for each mean length per age group.

		Age						
Year	No.	1	2	3	4	5	6	7
2011	2	3.2						
2010	31	4.1	7.5					
2009	18	4.1	7.4	10.0				
2008	23	3.9	7.8	10.8	12.3			
2007	9	4.6	8.5	11.3	13.2	14.1		
2006	2	3.6	6.3	9.1	11.5	12.6	12.9	
2005	1	5.2	9.7	12.3	12.9	13.9	14.9	15.2
Mean		4.1	7.7	10.6	12.5	13.8	13.6	15.2
Number		86	84	53	35	12	3	1
Smallest		2.9	5.2	7.4	8.4	11.9	12.2	15.2
Largest		6.4	10.8	13.7	15.3	15.6	14.9	15.2
Std error		0.1	0.1	0.2	0.3	0.3	0.8	
95% CI ±		0.2	0.3	0.5	0.6	0.6	1.6	

Otoliths were used for age-growth determinations; Intercept = 0
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Table 49. Age-frequency and CPUE (fish/hr) of spotted bass collected during 6.0 hours of nocturnal electrofishing at Laurel River Lake in April 2012.

	Inch class																Std
Age	2	3	5	6	7	8	9	10	11	12	13	14	15	Total	%	CPUE	error
1	2	1												3	2.2	0.50	(0.37)
2			3	9	18	13	8							51	36.7	8.50	(1.73)
3					5	6	5	7	4	4				31	22.3	5.17	(0.86)
4						2	3	7		11	9	5		37	26.6	6.17	(1.00)
5										2	7	2	1	12	8.6	2.00	(0.46)
6										2	2			4	2.9	0.67	(0.15)
7													1	1	0.7	0.17	(0.08)
	2	1	3	9	23	21	16	14	4	19	18	7	2	139	100.0	23.17	
%	1.4	0.7	2.2	6.5	16.5	15.1	11.5	10.1	2.9	13.7	12.9	5.0	1.4	100.0			

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Table 50. Population assessment for spotted bass collected from Laurel River Lake in April 2012 (scoring based on statewide assessment).

Parameter	Actual value	Assessment score
Mean length age-3 at capture	10.0	4
Spring CPUE age 1	0.50	1
Spring CPUE 11.0-13.9 in	6.83	3
Spring CPUE ≥14.0 in	1.67	3
Spring CPUE ≥17.0 in	0.00	0
Instantaneous mortality (Z)	0.767	
Annual mortality (A)	53.5	
Total score		11
Assessment rating		F

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Table 51. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 1.5 hours of 15-minute nocturnal electrofishing runs for black bass in Laurel River Lake on 26 September 2012; standard error is in parentheses.

		Inch class																
Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	17	20	Total	CPUE
Laurel River Arm	Largemouth bass	4	8	5	8	13	8	1	4	2	3	6			1	1	64	42.67 (8.56)
	Spotted bass	2	6	18	11	4		5	2	6	2	2	2	2			62	41.33 (5.02)
	Smallmouth bass					1											1	0.67 (0.67)

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Table 52. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall (September and October) in electrofishing samples at Laurel River Lake.

		Age 0		Age 0		Age 0 ≥5.0 in		Age 1[a]	
Year class	Area	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2012	Laurel River Arm	4.6	0.1	11.33	3.64	3.33	1.91		
2011 [b]	Laurel River Arm	4.1	0.3	10.67	5.63	3.33	1.91	6.00[c]	0.89
2010 [b]	Laurel River Arm	5.4	0.4	2.67	0.84	2.00	0.89	31.50[d]	7.54
2009	Laurel River Arm	3.8	0.3	6.00	3.22	0.67	0.67	19.33	6.96
2008 [b]	Laurel River Arm	3.2	0.3	1.33	0.84	0.00	0.00	14.00[e]	4.59
2007 [b]	Laurel River Arm	3.5	0.1	5.30	4.58	0.00	0.00	118.91[f]	12.43
2006 [b]	Laurel River Arm	3.7	0.1	12.70	4.89	0.67	0.67	5.39[g]	2.12
2005 [b]	Laurel River Arm	4.4	0.2	14.00	3.54	3.30	1.61	58.33[h]	9.18
2004	Laurel River Arm	4.9	0.2	14.00	5.82	8.00	3.43	8.30	2.35
2003	Laurel River Arm	3.4	0.1	36.70	13.99	0.70	0.67	2.60	1.00
2002	Laurel River Arm	4.5	0.1	30.70	5.81	8.70	3.49	10.30	4.05

[a] Age-1 largemouth bass CPUE based only on Laurel River Arm location

[b] Age-0 largemouth bass stocked in the fall

[c] Includes bass stocked in fall 2011; CPUE of fin-clipped bass=0.00 fish/hr

[d] Includes bass stocked in fall 2010; CPUE of fin-clipped bass=8.00 fish/hr

[e] Includes bass stocked in fall 2008; CPUE of fin-clipped bass=8.00 fish/hr

[f] Includes bass stocked in fall 2007; CPUE of fin-clipped bass=108.00 fish/hr

[g] Includes bass stocked in fall 2006; CPUE of fin-clipped bass=2.00 fish/hr

[h] Includes bass stocked in fall 2005; CPUE of fin-clipped bass=36.00 fish/hr

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Table 53. Number of fish and mean relative weight (Wr) for each length group of black bass collected at 312 Bridge in Laurel River Lake on 26 September 2012 Standard error is in parentheses.

Species	Length group					
	8.0-11.9 in		12.0-14.9 in		≥15.0 in	
Largemouth bass	No.	Wr	No.	Wr	No.	Wr
	15	95 (2)	9	100 (2)	2	114 (14)
	7.0-10.9 in		11.0-13.9 in		≥14.0 in	
Spotted bass	No.	Wr	No.	Wr	No.	Wr
	10	101 (3)	10	105 (3)	4	111 (2)

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Table 54. Length frequency and CPUE (fish/hr) of largemouth bass collected at Cedar Creek Lake in 3.5 hours (2.0 hours in lower end; 1.5 hours upper end; 30-min runs) of nocturnal electrofishing on 16 April 2012.

		Inch class																						
Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	Std. error
Lower	Largemouth bass	6	8	25	13	7	40	62	56	22	28	53	34	30	24	15	18	8	10	5	1	465	232.50	25.29
Upper	Largemouth bass	1	1	5	1	8	29	58	55	23	33	49	40	39	29	18	16	10	7	3		425	283.33	10.09
Total	Largemouth bass	7	9	30	14	15	69	120	111	45	61	102	74	69	53	33	34	18	17	8	1	890	254.29	17.40

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Table 55. PSD and RSD_{15} values obtained for largemouth bass taken in spring electrofishing samples in each area of Cedar Creek Lake on 16 April 2012; 95% confidence levels are in parentheses.

Area	No. ≥8.0 in	PSD	RSD_{15}
Lower	406	56 (± 5)	27 (± 4)
Upper	409	60 (± 5)	30 (± 4)
Total	815	58 (± 3)	29 (± 3)

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Table 56. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from each section of Cedar Creek Lake from 2003-2012. Numbers in parentheses are standard errors.

		Length group											
		<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in			
Year	Area	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	Total	Std. err.
2012	Lower	29.50	11.73	90.00	12.25	57.50	9.46	55.50	9.00	8.00	2.94	232.50	25.29
	Upper	10.67	2.67	110.00	9.45	81.33	3.71	81.33	8.67	6.67	0.67	283.33	10.09
	Total	21.43	7.40	98.57	8.48	67.71	7.12	66.57	7.82	7.43	1.62	254.29	17.40
2011	Lower	89.00	12.82	64.00	8.60	46.50	6.18	31.00	8.81	5.00	1.73	230.50	19.19
	Upper	43.33	16.34	44.00	10.07	35.33	4.81	35.33	8.74	3.33	1.33	158.00	13.61
	Total	69.43	13.05	55.43	7.21	41.71	4.40	32.86	5.82	4.29	1.11	199.43	18.61
2010	Lower	50.21	5.41	103.84	15.58	40.21	6.78	38.81	11.08	4.09	2.24	233.07	24.29
	Upper	17.33	9.40	107.33	14.53	51.33	10.48	48.00	5.29	4.00	1.15	224.00	23.18
	Total	36.12	8.07	105.34	10.00	44.98	5.82	42.75	6.52	4.05	1.27	229.18	15.77
2009	Lower	111.00	37.78	59.00	10.34	35.50	6.65	35.50	6.90	5.50	1.26	241.00	37.47
	Upper	64.67	38.82	69.33	12.98	32.00	6.00	37.33	12.77	4.67	1.76	203.33	35.67
	Total	91.14	26.66	63.43	7.68	34.00	4.28	36.29	6.09	5.14	0.96	224.86	25.32
2008	Lower	81.50	23.61	75.50	15.63	15.00	3.42	34.00	6.48	4.50	2.63	206.00	36.74
	Upper	56.67	4.81	64.67	7.69	22.67	1.33	30.67	9.82	4.00	3.06	174.67	1.33
	Total	70.86	13.70	70.86	9.11	18.29	2.45	32.57	5.12	4.29	1.82	192.57	20.64
2007	Lower	40.00	9.50	102.50	28.60	23.50	6.40	35.00	3.10	3.50	0.50	201.00	38.50
	Upper	17.33	13.50	49.30	8.70	12.67	2.70	34.67	3.30	3.33	1.30	114.00	21.20
	Total	30.29	8.50	79.71	19.00	18.86	4.20	34.86	2.10	3.43	0.60	163.70	28.20
2006	Lower	33.00	9.90	76.00	23.40	6.00	2.50	37.00	5.90			152.00	36.30
	Upper	12.00	3.10	30.00	1.20	7.33	1.80	28.67	2.70	0.67	0.70	78.00	4.20
	Total	24.00	6.90	56.30	15.60	6.57	1.50	33.43	3.70	0.29	0.30	120.30	24.50
2005	Lower	122.00	11.40	19.00	7.00	38.50	5.70	56.50	12.30			236.00	25.00
	Upper	23.33	9.30	4.67	1.80	18.67	0.70	40.00	7.20			86.67	12.90
	Total	79.70	21.10	12.86	4.80	30.00	5.10	49.40	7.90			172.00	33.40
2004	Lower	37.80	7.30	38.30	5.70	68.70	15.10	6.50	3.10			151.30	22.50
	Upper	11.30	3.50	28.00	7.20	84.70	11.70	6.00	2.00			130.00	24.10
	Total	27.90	6.60	34.50	4.60	74.70	10.20	6.30	2.00			143.30	16.10
2003	Lower	134.40	8.50	8.80	2.90	19.60	3.30	0.80	0.50			163.60	11.70
	Upper	218.00	51.30	18.70	9.80	13.30	2.40					250.00	54.00
	Total	165.80	23.30	12.50	4.10	17.30	2.40	0.50	0.30			196.00	24.70

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Table 57. Population assessment for largemouth bass based on spring electrofishing at Cedar Creek Lake from 2003-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age 1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Total score	Assessement rating
Management objective		≥11.5 in	≥16.00 fish/hr	≥20.00 fish/hr	≥30.00 fish/hr	≥4.00 fish/hr		
2012	Value	13.5	16.29	67.71	66.57	7.43		
	Score	4	2	4	4	4	18	E
2011	Value	13.5	68.57	41.71	32.86	4.29		
	Score	4	3	3	4	4	18	E
2010	Value	13.5	35.47	44.98	42.75	4.05		
	Score	4	2	3	4	4	17	E
2009	Value	12.0	92.57	34.00	36.29	5.14		
	Score	4	4	2	4	4	18	E
2008	Value	12.0	72.57	18.29	32.57	4.29		
	Score	4	3	1	4	4	16	G
2007	Value	12.0	26.57	18.90	34.90	3.40		
	Score	4	2	1	4	3	14	G
2006	Value	14.0	23.14	6.57	33.43	0.29		
	Score	4	2	1	4	1	12	G
2005	Value	14.0	1.71	30.00	49.43	0.00		
	Score	4	1	2	4	0	11	F
2004	Value	14.0	5.38	74.70	6.30	0.00		
	Score	4	1	4	2	0	11	F
2003	Value	14.0	5.97	17.30	0.50	0.00		
	Score	4	1	1	1	0	7	P

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Table 58. Length-frequency and CPUE (fish/hr) of largemouth bass collected during 3.5 hours of nocturnal electrofishing (2.0 hours in lower end; 1.5 hours upper end) (30 minute runs) at Cedar Creek Lake on 27 September 2012; standard error is in

Area	Inch class																			Total	CPUE
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
Lower	1	1	3	12	7	20	30	15	18	23	28	15	8	9	7	1	3	2	2	205	102.50 (7.80)
Upper	30	3	1	2	4	3	13	17	16	27	22	17	14	10	4	16	4	2		205	136.67 (12.77)
Total	31	4	4	14	11	23	43	32	34	50	50	32	22	19	11	17	7	4	2	410	117.14 (9.40)

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Table 59. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall (September and October) in electrofishing samples at Cedar Creek Lake.

	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
Year class	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2012	4.0	0.19	18.29	7.55	7.14	1.79		
2011	4.2	0.10	27.14	4.04	6.00	1.07	16.29	6.46
2010	5.0	0.06	59.46	15.83	33.40	6.05	68.57	12.86
2009	4.1	0.11	17.43	4.31	3.71	1.77	35.47	7.93
2008	4.7	0.06	55.71	8.58	24.86	5.38	92.57	26.86
2007	5.4	0.04	32.86	7.82	28.57	6.60	72.57	13.45
2006	4.7	0.05	43.71	11.31	17.71	5.28	26.57	7.43
2005	4.8	0.06	55.70	9.51	28.00	7.73	23.14	6.69
2004	4.8	0.04	17.40	3.10	12.90		1.70	0.90

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Table 60. Number of fish and mean relative weight (Wr) for each length group of largemouth bass collected in Cedar Creek on 27 September 2012. Standard error is in parentheses.

		Length group					
		8.0-11.9 in		12.0-14.9 in		≥15.0 in	
Species	Area	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Lower	86	84 (1)	51	83 (1)	24	89 (2)
	Upper	73	89 (1)	52	90 (2)	36	99 (2)
	Total	159	87 (1)	103	86 (1)	60	95 (1)

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Table 61. Length frequency and CPUE (fish/hr) of bluegill and redear sunfish collected at Cedar Creek Lake in 1.875 hours (7.5-min runs) of daytime electrofishing on 29 May 2012.

	Inch class											
Species	1	2	3	4	5	6	7	8	9	Total	CPUE	Std. error
Bluegill	5	117	201	134	53	25	6			541	288.53	52.72
Redear sunfish		4	6	2	34	44	38	5	1	134	71.47	14.74

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Table 62. Spring electrofishing CPUE (fish/hr) for each length group of bluegill and redear sunfish collected at Cedar Creek from 2007-2012.

		Length group											
		<3.0 in		3.0-5.9 in		6.0-7.9 in		≥8.0 in		≥10.0 in		Total	
Species	Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
Bluegill													
	2012	65.07	14.01	206.93	40.80	16.53	5.26	0.00	0.00			288.53	52.72
	2011	301.00	45.93	411.00	56.72	21.00	4.78	0.00	0.00			733.00	81.14
	2010	411.73	106.45	426.13	48.58	20.27	3.89	0.00	0.00			858.13	145.65
	2009	579.60	92.40	217.20	22.80	20.40	7.80	0.00	0.00			817.20	95.60
	2008	408.80	78.70	370.00	35.60	23.60	5.10	0.00	0.00			802.40	91.70
	2007	234.80	57.10	289.60	25.20	25.60	6.10	0.00	0.00			550.00	63.40
Redear sunfish													
	2012	2.13	1.23	22.40	5.31	43.73	10.50	3.20	1.31	0.00	0.00	71.47	14.74
	2011	3.00	1.44	56.50	10.65	21.00	3.92	0.50	0.50	0.00	0.00	81.00	14.25
	2010	12.80	4.67	56.00	9.56	26.13	6.96	3.73	1.72	0.00	0.00	98.67	15.21
	2009	27.20	6.50	51.60	7.80	36.40	5.80	2.40	1.70	0.00	0.00	117.60	13.40
	2008	10.40	3.00	66.00	12.10	102.00	25.10	8.00	4.00	0.00	0.00	186.40	32.70
	2007	13.20	3.70	46.00	8.20	159.60	48.80	16.40	6.20	0.00	0.00	235.20	52.00

bbrbgccl.d12

Table 63. PSD and RSD values obtained for bluegill and redear sunfish taken in spring electrofishing samples in Cedar Creek Lake on 29 May 2012; 95% confidence levels are in parentheses.

Species	No. ≥ stock size	PSD	RSD[a]
Bluegill	419	7 (± 3)	0 (± 0)
Redear sunfish	124	35 (± 8)	1 (± 2)

[a] Bluegill = RSD_8, Redear sunfish = RSD_9

bbrbgccl.d12

Table 64. Length frequency and CPUE (fish/nn) for each species of crappie collected at Cedar Creek Lake in 30 net-nights during October and November 2012.

	Inch class								
Species	7	8	9	10	12	13	Total	CPUE	Std. error
White crappie					1		1	0.03	0.03
Black crappie	1	2	1	2	1	1	8	0.27	0.11

sedtnccl.d12

Table 65. PSD and RSD_{10} values calculated for crappie collected in trapnets at Cedar Creek Lake in October and November 2012; 95% confidence limits are in parentheses.

Species	No. >5.0 in	PSD	RSD_{10}
White crappie	1	100 (-)	100 (-)
Black crappie	8	88 (± 25)	50 (± 37)

sedtnccl.d12

Table 66. Mean back calculated lengths (in) at each annulus for white crappie collected from Cedar Creek Lake during 2012, including the 95% confidence interval (CI) for each mean length per age group.

		Age			
Year	No.	1	2	3	4
2008	1	4.6	8.2	10.3	11.3
Mean		4.6	8.2	10.3	11.3
Number		1	1	1	1
Smallest		4.6	8.2	10.3	11.3
Largest		4.6	8.2	10.3	11.3
Std error					
95% CI ±					

Otoliths were used for age-growth determinations; Intercept = 0
sedagccc.d12

Table 67. Mean back calculated lengths (in) at each annulus for black crappie collected from Cedar Creek Lake during 2012, including the 95% confidence interval (CI) for each mean length per age group.

		Age								
Year	No.	1	2	3	4	5	6	7	8	9
2011	2	4.4								
2010	3	4.0	6.8							
2009	1	4.9	8.1	11.1						
2008	1	4.3	7.1	9.9	11.2					
2003	1	4.4	6.2	6.9	7.3	7.8	8.2	8.9	9.3	9.8
Mean		4.3	7.0	9.3	9.3	7.8	8.2	8.9	9.3	9.8
Number		8	6	3	2	1	1	1	1	1
Smallest		3.4	6.2	6.9	7.3	7.8	8.2	8.9	9.3	9.8
Largest		5.4	8.1	11.1	11.2	7.8	8.2	8.9	9.3	9.8
Std error		0.2	0.4	1.3	2.0					
95% CI ±		0.5	0.7	2.5	3.9					

Otoliths were used for age-growth determinations; Intercept = 0
sedagccc.d12

Table 68. Age-frequency and CPUE (fish/nn) of white crappie trap-netted at Cedar Creek Lake in 30 net-nights in October and November 2012.

	Inch class				Std
Age	12	Total	%	CPUE	error
4+	1	1	100.0	0.03	0.03
Total	1	1	100.0	0.03	
%	100.0				

CPUE of ≥ 8.0 in (quality size) crappie = 0.03 fish/nn
CPUE of ≥ 10.0 in (preferred size) crappie = 0.03 fish/nn
sedtnccl.d12
sedagccc.d12

Table 69. Age-frequency and CPUE (fish/nn) of black crappie trap-netted at Cedar Creek Lake in 30 net-nights in October and November 2012.

	Inch class									Std
Age	7	8	9	10	12	13	Total	%	CPUE	error
1+	1		1				2	25.0	0.07	0.05
2+		2		1			3	37.5	0.10	0.05
3+						1	1	12.5	0.03	0.03
4+					1		1	12.5	0.03	0.03
9+				1			1	12.5	0.03	0.02
Total	1	2	1	2	1	1	8	100.0	0.27	
%	12.5	25.0	12.5	25.0	12.5	12.5				

CPUE of ≥ 8.0 in (quality size) crappie = 0.23 fish/nn
CPUE of ≥ 10.0 in (preferred size) crappie = 0.13 fish/nn
sedtnccl.d12
sedagccc.d12

Table 70. Number of fish and mean relative weight (Wr) for each length group of crappie collected in Cedar Creek Lake in October and November 2012. Standard error is in parentheses.

	Length group					
	5.0 - 7.9 in		8.0 - 9.9 in		≥ 10.0 in	
Species	No.	Wr	No.	Wr	No.	Wr
White crappie	0	-	0	-	1	75 (-)
Black crappie	1	80 (-)	3	81 (2)	4	85 (2)

sedtnccl.d12

Table 71. Length frequency and CPUE (fish/hr) of largemouth bass collected at Bert T. Combs Lake in 1.5 hours (15.0-min runs) of nocturnal electrofishing on 27 March 2012.

Species	Inch class												Total	CPUE	Std. error
	3	4	6	7	8	9	10	11	12	13	14	16			
Largemouth bass	1	4	10	31	35	10	22	40	26	6	4	1	190	126.67	28.91

sedpsdbc.d12

Table 72. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Bert T. Combs Lake on 27 March 2012.

Year	Length group										Total	
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in			
	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	30.67	11.99	71.33	14.29	24.00	4.26	0.67	0.67	0.00	0.00	126.67	28.91
2009	21.33	9.33	45.33	7.91	38.67	5.81	6.00	0.89	4.00	1.46	111.33	16.21
2006	5.33	1.30	100.70	21.20	25.30	4.30	11.30	2.80	4.70	3.20	142.70	25.70

sedpsdbc.d12

Table 73. PSD and RSD_{15} values obtained for largemouth bass taken in spring electrofishing samples in Bert T. Combs Lake on 27 March 2012; 95% confidence levels are in parentheses.

Year	No. ≥8.0 in	PSD	RSD_{15}
2012	144	26 (± 7)	1 (± 1)

sedpsdbc.d12

Table 74. Mean back calculated lengths (in) at each annulus for largemouth bass collected from Bert T. Combs Lake during 2012, including the 95% confidence interval (CI) for each mean length per age

		Age									
Year	No.	1	2	3	4	5	6	7	8	9	10
2011	5	4.2									
2010	40	5.0	7.8								
2009	9	4.6	9.1	10.8							
2008	5	4.0	7.3	10.5	11.4						
2007	12	5.3	8.4	10.2	11.6	12.2					
2006	2	5.6	8.6	10.5	11.3	11.9	12.2				
2005	6	4.8	7.5	10.0	11.1	11.5	12.0	12.4			
2004	3	4.9	7.5	9.6	10.7	11.2	11.8	12.3	12.7		
2003	3	5.7	8.5	9.7	10.3	10.8	11.1	11.5	11.9	12.2	
2002	2	5.9	8.3	9.9	10.6	11.4	12.1	12.4	12.9	13.4	13.7
Mean		4.9	8.0	10.2	11.2	11.7	11.8	12.2	12.5	12.6	13.7
Number		87	82	42	33	28	16	14	8	5	2
Smallest		2.7	5.7	8.1	9.0	9.5	9.8	10.1	10.4	10.7	13.2
Largest		9.0	11.5	14.1	14.1	15.6	13.4	13.9	14.4	13.9	14.1
Std error		0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.5	0.6	0.5
95% CI ±		0.3	0.3	0.4	0.4	0.4	0.5	0.6	1.0	1.2	0.9

Otoliths were used for age-growth determinations; Intercept = 0
sedagbcl.d12

Table 75. Age-frequency and CPUE (fish/hr) of largemouth bass collected during 1.5 hours of nocturnal electrofishing at Bert T. Combs Lake on 27 March 2012.

	Inch class														Std
Age	3	4	6	7	8	9	10	11	12	13	14	Total	%	CPUE	error
1	1	4										5	2.7	3.33	(2.17)
2			10	31	35	8	2					86	46.0	57.33	(18.32)
3						3	10	6			1	20	10.7	13.33	(2.72)
4							2	9	3			14	7.5	9.33	(1.64)
5							2	15	9	2		28	15.0	18.67	(3.03)
6									6			6	3.2	4.00	(0.78)
7								6	9	1		16	8.6	10.67	(1.68)
8							2			1	1	4	2.1	2.67	(0.60)
9							2	3		1		6	3.2	4.00	(0.80)
10										1	1	2	1.1	1.33	(0.37)
	1	4	10	31	35	11	20	39	27	6	3	187	100.0	124.67	
%	0.5	2.1	5.3	16.6	18.7	5.9	10.7	20.9	14.4	3.2	1.6	100.0			

sedpsdbc.d12
sedagbcl.d12

Table 76. Population assessment for largemouth bass collected from Bert T. Combs Lake in March 2012.

Parameter	Actual value	Assessment score
Mean length age-3 at capture	10.8	3
Spring CPUE age 1	3.33	1
Spring CPUE 12.0-14.9 in	24.00	2
Spring CPUE ≥15.0 in	0.67	1
Spring CPUE ≥20.0 in	0.00	0
Instantaneous mortality (Z)	0.349	
Annual mortality (A)	29.5	
Total score		7
Assessment rating		P

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sedagbcl.d12

Table 77. Length frequency and CPUE (fish/hr) of bluegill collected at Bert T. Combs Lake in 1.0 hour (7.5-min runs) of daytime electrofishing on 16 May 2012.

	Inch class										
Species	1	2	3	4	5	6	7	8	Total	CPUE	Std. error
Bluegill	34	27	15	8	7	5	4	6	106	106.00	32.20

sedbgbc.d12

Table 78. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Bert T. Combs Lake on 16 May 2012.

	Length group									
	<3.0 in		3.0-5.9 in		6.0-7.9 in		≥8.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	61.00	29.97	30.00	7.52	9.00	3.18	6.00	3.30	106.00	32.20
2006	35.60	19.20	14.40	7.20	17.30	6.30	6.70	2.30	74.00	23.70

sedbgbc.d12

Table 79. PSD and RSD_8 values obtained for bluegill taken in spring electrofishing samples in Bert T. Combs Lake on 16 May 2012; 95% confidence levels are in parentheses.

Species	No. ≥ 3.0 in	PSD	RSD_8
Bluegill	45	33 (± 14)	13 (± 10)

sedbgbc.d12

Table 80. Mean back calculated lengths (in) at each annulus for bluegill collected from Bert T. Combs Lake during 2012, including the 95% confidence interval (CI) for each mean length per age group.

		Age				
Year	No.	1	2	3	4	5
2011	20	1.8				
2010	21	1.8	2.9			
2009	11	1.7	3.1	4.7		
2008	11	2.1	3.4	5.3	6.9	
2007	9	2.3	3.8	5.7	6.8	7.1
Mean		1.9	3.2	5.2	6.8	7.1
Number		72	52	31	20	9
Smallest		0.9	2.1	3.8	5.3	5.7
Largest		2.9	5.0	7.5	8.3	8.7
Std error		0.0	0.1	0.2	0.2	0.4
95% CI ±		0.1	0.2	0.4	0.5	0.8

Otoliths were used for age-growth determinations; Intercept = 0

sedagbcb.d12

Table 81. Age-frequency and CPUE of bluegill (fish/hr) collected during 1.0 hour of electrofishing at Bert T. Combs Lake during May 2012.

	Inch class											Std
Age	1	2	3	4	5	6	7	8	Total	%	CPUE	error
1	34	8							42	39.3	42.00	22.39
2		19	14						33	30.8	33.00	12.17
3			1	8	1		1		11	10.3	11.00	3.95
4					4	3	2	3	12	11.2	12.00	3.18
5					2	3	1	3	9	8.4	9.00	2.61
Total	34	27	15	8	7	6	4	6	107	100.0	107.00	
%	31.8	25.2	14.0	7.5	6.5	5.6	3.7	5.6				

sedbgbc.d12
sedagbcb.d12

Table 82. Population assessment for bluegill collected from Bert T. Combs Lake in May 2012 (scoring based on statewide assessment).

Parameter	Actual value	Assessment score
Mean length age-2 at capture	2.9	1
Years to 6.0 in	3-3+	3
Spring CPUE ≥ 6.0 in	15.00	1
Spring CPUE of ≥ 8.0 in	6.00	2
Instantaneous mortality (Z)	0.415	
Annual mortality (A)	34.0	
Total score		7
Assessment rating		F

sedbgbc.d12
sedagbcb.d12

Table 83. Length frequency and CPUE (fish/hr) of largemouth bass collected at Beulah Lake in 1.5 hours (15.0-min runs) of nocturnal electrofishing on 26 March 2012.

	Inch class																					
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	19	20	21	22	Total	CPUE	Std. error
Largemouth bass	3	28	34	6	10	63	62	52	56	28	4	1	2	1	2	1	3	4	2	362	241.33	29.66

sedpsdbl.d12

Table 84. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Beulah Lake on 26 March 2012.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	54.00	10.97	155.33	19.85	22.00	4.10	10.00	3.69	6.00	3.22	241.33	29.66
2009	82.00	12.76	168.67	23.33	51.33	6.88	6.67	1.69	4.00	1.46	308.67	20.46
2006	87.30	18.20	185.30	13.30	4.70	1.90	4.70	1.90	2.00	0.90	282.00	23.90

sedpsdbl.d12

Table 85. PSD and RSD_{15} values obtained for largemouth bass taken in spring electrofishing samples in Beulah Lake on 26 March 2012; 95% confidence levels are in parentheses.

Year	No. ≥8.0 in	PSD	RSD_{15}
2012	281	17 (± 4)	5 (± 3)

sedpsdbl.d12

Table 86. Length frequency and CPUE (fish/hr) of bluegill and redear sunfish collected at Beulah Lake in 1.25 hour (7.5-min runs) of daytime electrofishing on 21 May 2012.

	Inch class										
Species	1	2	3	4	5	6	7	8	Total	CPUE	Std. error
Bluegill	27	53	20	38	42	8	9	6	203	162.40	50.60
Redear sunfish					2			1	3	2.40	1.22

sedbgbl.d12

Table 87. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Beulah Lake on 21 May 2012.

	Length group									
	<3.0 in		3.0-5.9 in		6.0-7.9 in		≥8.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	64.00	29.74	80.00	26.29	13.60	2.08	4.80	3.20	162.40	50.60
2006	474.60	123.90	36.20	10.50	20.80	8.30	0.80	0.80	532.30	130.80

sedbgbl.d12

Table 88. PSD and RSD_8 values obtained for bluegill taken in spring electrofishing samples in Beulah Lake on 21 May 2012; 95% confidence levels are in parentheses.

Species	No. ≥ 3.0 in	PSD	RSD_8
Bluegill	123	19 (± 7)	5 (± 4)

sedbgbl.d12

Table 89. Mean back calculated lengths (in) at each annulus for bluegill collected from Beulah Lake during 2012, including the 95% confidence interval (CI) for each mean length per age group.

		Age						
Year	No.	1	2	3	4	5	6	7
2011	20	1.9						
2010	26	2.2	3.9					
2009	11	2.0	3.8	5.7				
2008	6	2.0	3.6	5.5	7.0			
2007	7	2.1	3.3	5.0	6.3	7.4		
2006	4	1.8	3.6	5.0	6.4	7.2	7.7	
2005	1	1.4	3.3	5.8	7.0	7.7	8.1	8.6
Mean		2.0	3.8	5.4	6.6	7.4	7.8	8.6
Number		75	55	29	18	12	5	1
Smallest		1.1	2.5	3.7	5.3	6.2	6.9	8.6
Largest		3.5	5.5	7.0	7.8	8.1	8.1	8.6
Std error		0.1	0.1	0.1	0.2	0.1	0.2	
95% CI ±		0.1	0.2	0.3	0.4	0.3	0.5	

Otoliths were used for age-growth determinations; Intercept = 0

sedagblb.d12

Table 90. Age-frequency and CPUE (fish/hr) of bluegill collected during 1.25 hours of electrofishing at Beulah Lake during May 2012.

	Inch class											Std
Age	1	2	3	4	5	6	7	8	Total	%	CPUE	error
1	27	53							80	39.2	64.00	29.74
2			20	38	14				72	35.3	57.60	21.95
3					25	4	1		30	14.7	24.00	6.25
4					4	1	3	1	9	4.4	7.20	0.93
5						1	5	2	8	3.9	6.40	0.74
6						1		3	4	2.0	3.20	1.34
7								1	1	0.5	0.80	0.46
Total	27	53	20	38	43	7	9	7	204	100.0	163.20	
%	13.2	26.0	9.8	18.6	21.1	3.4	4.4	3.4				

sedbgbl.d12
sedagblb.d12

Table 91. Population assessment for bluegill collected from Beulah Lake in May 2012 (scoring based on statewide assessment).

Parameter	Actual value	Assessment score
Mean length age-2 at capture	4.2	2
Years to 6.0 in	3-3+	3
Spring CPUE $\geq$ 6.0 in	18.40	1
Spring CPUE $\geq$ 8.0 in	4.80	1
Instantaneous mortality (Z)	0.723	
Annual mortality (A)	51.5	
Total score		7
Assessment rating		F

sedbgbl.d12
sedagblb.d12

Table 92. Length frequency and CPUE (fish/hr) of black bass collected at Cannon Creek Lake in 2.0 hours (15.0-min runs) of nocturnal electrofishing on 29 March 2012.

	Inch class																
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	22	Total	CPUE	Std. err.
Largemouth bass	1			2	2	4	17	14	11	3	4	3	2	1	64	32.00	5.13
Spotted bass	1	5		2	12	24	16	9	9						78	39.00	8.54
Smallmouth bass			1			1	2	3	3	4	1				15	7.50	1.92

sedpsdcc.d12

Table 93. Spring electrofishing CPUE (fish/hr) for each length group of black bass collected at Cannon Creek Lake on 29 March 2012.

		Length group											
		<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Species	Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
Largemouth bass													
	2012	2.50	1.50	23.00	3.84	5.00	1.46	1.50	0.73	0.50	0.50	32.00	5.13
	2009	12.50	1.92	13.00	3.00	10.00	1.69	0.00	0.00	0.00	0.00	35.50	4.75
	2006	2.40	1.10	15.20	2.10	2.80	0.90	2.40	0.90	0.40	0.40	22.80	2.60
		<8.0 in		8.0-10.9 in		11.0-13.9 in		≥14.0 in		≥17.0 in		Total	
		CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
Spotted bass													
	2012	10.00	3.12	24.50	4.63	4.50	1.76	0.00	0.00	0.00	0.00	39.00	8.54
	2009	31.50	7.15	24.00	3.63	10.50	3.11	0.00	0.00	0.00	0.00	66.00	9.35
	2006	3.20	1.40	15.20	3.30	2.80	1.00	0.40	0.40	0.00	0.00	21.60	4.90
		<8.0 in		8.0-10.9 in		11.0-13.9 in		≥14.0 in		≥17.0 in		Total	
		CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
Smallmouth bass													
	2012	0.50	0.50	3.00	1.00	4.00	1.51	0.00	0.00	0.00	0.00	7.50	1.92
	2009	12.50	1.92	1.50	0.73	9.50	1.30	0.00	0.00	0.00	0.00	23.50	2.44
	2006	1.20	0.90	4.40	1.30	2.80	1.20	0.00	0.00	0.00	0.00	8.40	2.20

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Table 94. PSD and RSD values obtained for black bass taken in spring electrofishing samples in Cannon Creek Lake on 29 March 2012; 95% confidence levels are in parentheses.

Species	No. ≥ stock size	PSD	RSD[a]
Largemouth bass	59	22 (± 11)	5 (± 6)
Spotted bass	70	13 (± 8)	0 (± 0)
Smallmouth bass	14	57 (± 27)	0 (± 0)

[a]Largemouth bass = RSD_{15}, spotted bass = RSD_{14}, smallmouth bass = RSD_{14}

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Table 95. Length frequency and CPUE (fish/hr) of black bass collected at Lake Linville in 1.5 hours (15-min runs) of nocturnal electrofishing on 12 April 2012.

	Inch class																			
Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE	Std. error
Largemouth bass	10	23	34	4	25	75	65	38	31	24	8	5	3	2	4	3	1	355	236.67	40.32
Spotted bass	4	7	5	9	53	24	23	24	7	2	3		1					162	108.00	18.30
Smallmouth bass				1						1								2	1.33	0.84

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Table 96. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Lake Linville on 12 April 2012.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	47.33	10.55	135.33	26.24	42.00	5.24	12.00	2.73	0.67	0.67	236.67	40.32
2011	48.00	7.80	108.67	11.00	22.00	5.54	9.33	2.67	1.33	1.33	188.00	18.01
2010	52.00	25.13	194.67	45.42	39.33	8.35	10.67	2.23	4.67	1.23	296.67	71.45
2009	55.60	10.76	93.20	10.88	8.40	1.51	10.40	1.60	2.40	0.88	167.60	17.06
2008	54.00	13.46	144.40	19.88	12.40	3.89	18.40	4.55	2.80	1.20	229.20	28.03
2007	46.40	15.68	101.60	19.64	13.20	1.89	25.60	3.59	4.80	2.05	186.80	32.00
2006	10.00	2.50	47.30	12.60	22.00	4.00	10.00	2.30	2.70	1.30	89.30	11.20

sedpsdll.d12

Table 97. Spring electrofishing CPUE (fish/hr) for each length group of spotted bass collected at Lake Linville on 12 April 2012.

	Length group											
	<8.0 in		8.0-10.9 in		11.0-13.9 in		≥14.0 in		≥17.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	16.67	6.65	66.67	11.76	22.00	4.47	2.67	0.84	0.00	0.00	108.00	18.30
2011	22.67	5.72	47.33	7.96	9.33	3.96	1.33	0.84	0.00	0.00	80.67	14.40
2010	32.00	8.26	114.00	22.31	20.00	5.27	0.67	0.67	0.00	0.00	166.67	34.40
2009	62.40	11.64	64.00	9.18	2.80	1.04	0.40	0.40	0.00	0.00	129.60	19.53
2008	96.00	14.47	60.40	8.61	8.00	2.15	1.60	0.88	0.00	0.00	166.00	23.60
2007	76.00	26.00	44.80	10.40	15.20	4.45	2.00	1.23	0.40	0.40	138.00	36.50
2006	24.00	7.00	35.30	7.10	10.00	2.70	2.00	1.40	0.00	0.00	71.30	14.50

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Table 98. Population assessment for largemouth bass based on spring electrofishing at Lake Linville from 2002-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age 1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Total score	Assessement rating
Management objectives		≥ 10.8 in	≥ 16.00 fish/hr	≥ 20.00 fish/hr	≥ 17.00 fish/hr	≥ 2.00 fish/hr		
2012	Value	11.3	47.33	42.00	12.00	0.67		
	Score	3	3	3	2	1	12	G
2011	Value	11.1	48.00	22.00	9.33	1.33		
	Score	3	3	2	2	2	12	G
2010	Value	11.1	47.33	39.33	10.67	4.67		
	Score	3	3	3	2	4	15	G
2009	Value	11.1	52.00	8.40	10.40	2.40		
	Score	3	3	1	2	3	12	G
2008	Value	11.1	34.80	12.40	18.40	2.80		
	Score	3	2	1	3	3	12	G
2007	Value	11.1	39.20	13.20	25.60	4.80		
	Score	3	2	1	3	4	13	G
2006	Value	11.1	6.53	22.00	10.00	2.70		
	Score	3	1	2	2	3	11	F
2002	Value	11.7	4.00	12.00	14.67	1.33		
	Score	4	1	1	2	2	10	F

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Table 99. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Lake Linville on 12 April 2012; 95% confidence limits are in parentheses.

Species	No. fish ≥stock size	PSD	RSD[a]
Largemouth bass	284	29 (± 5)	6 (± 3)
Spotted bass	146	25 (± 7)	3 (± 3)
Smallmouth bass	2	50 (± 98)	0 (± 0)

[a]Largemouth bass = RSD_{15}, spotted bass = RSD_{14}

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Table 100. Mean back calculated lengths (in) at each annulus for largemouth bass collected from Lake Linville during 2012, including the 95% confidence interval (CI) for each mean length per age group.

		Age								
Year	No.	1	2	3	4	5	6	7	8	9
2011	28	5.8								
2010	22	6.1	9.2							
2009	14	6.0	9.4	11.3						
2008	19	6.5	10.1	11.9	13.3					
2007	9	6.3	9.3	11.1	12.4	13.3				
2006	9	6.4	9.7	11.6	12.9	14.2	15.2			
2005	3	6.4	9.9	11.4	12.3	13.4	13.8	14.4		
2004	1	6.1	9.7	11.8	14.2	15.8	17.3	18.5	19.1	
2003	1	7.2	11.9	13.4	14.4	15.6	16.3	16.6	16.9	17.2
Mean		6.1	9.6	11.6	13.0	13.9	15.1	15.7	18.0	17.2
Number		106	78	56	42	23	14	5	2	1
Smallest		4.0	7.7	9.2	10.3	10.7	11.3	11.6	16.9	17.2
Largest		8.8	12.6	13.8	16.7	18.5	19.1	18.5	19.1	17.2
Std error		0.1	0.1	0.2	0.2	0.5	0.6	1.3	1.1	
95% CI ±		0.2	0.2	0.3	0.5	1.0	1.2	2.6	2.2	

Otoliths were used for age-growth determinations; Intercept = 0
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Table 101. Age-frequency and CPUE (fish/hr) of largemouth bass collected during 1.5 hours of nocturnal electrofishing at Lake Linville on 12 April 2012.

	Inch class																			Std
Age	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	%	CPUE	error
1	10	23	34	4													71	20.2	47.33	(10.55)
2					25	67	14	3									109	31.0	72.67	(17.66)
3						8	29	17	8	2							64	18.2	42.67	(6.03)
4							7	3	20	12	5	2					49	13.9	32.67	(4.24)
5							14	7	3	2	2	1			2		31	8.8	20.67	(3.29)
6								3		5	2	2	3	1		2	18	5.1	12.00	(1.75)
7								3		2					2		7	2.0	4.67	(1.07)
8																2	2	0.6	1.33	(0.68)
9														1			1	0.3	0.67	(0.42)
	10	23	34	4	25	75	64	36	31	23	9	5	3	2	4	4	352	100.0	234.67	
%	2.8	6.5	9.7	1.1	7.1	21.3	18.2	10.2	8.8	6.5	2.6	1.4	0.9	0.6	1.1	1.1	100.0			

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Table 102. Population assessment for largemouth bass collected from Lake Linville in April 2012 (scoring based on statewide assessment).

Parameter	Actual value	Assessment score
Mean length age-3 at capture	11.3	3
Spring CPUE age 1	47.33	3
Spring CPUE 12.0-14.9 in	42.00	3
Spring CPUE ≥15.0 in	12.00	2
Spring CPUE ≥20.0 in	0.67	1
Instantaneous mortality (Z)	0.572	
Annual mortality (A)	43.6	
Total score		12
Assessment rating		G

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Table 103. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 1.5 hours of 15-minute nocturnal electrofishing runs for black bass in Lake Linville on 2 October 2012; standard error is in parentheses.

	Inch class																			
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	20	Total	CPUE
Largemouth bass	1	14	35	13	6	7	25	44	20	32	21	8	3	5	1	3	3	1	242	161.33 (33.52)
Spotted bass		5	5	2	5	15	11	17	16	10	4								90	60.00 (11.68)
Smallmouth bass						1	1												2	1.33 (0.84)

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Table 104. Indices of year class strength at age-0 and age-1 and mean lengths (in) of largemouth bass collected in the fall (Septemberand October) in electrofishing samples at Lake Linville.

	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
Year class	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2012	4.4	0.1	42.00	14.08	8.67	3.78		
2011	5.4	0.1	38.67	16.02	25.33	11.44	47.33	10.55
2010	5.1	0.1	57.33	19.26	30.67	7.35	48.00	7.80
2009	4.5	0.1	75.33	33.71	18.00	6.35	47.33	22.66
2008	5.1	0.1	49.60	12.82	29.60	8.62	52.00	10.10
2007	4.8	0.1	45.80	14.90	17.45	7.20	34.80	11.58
2006	5.1	0.1	84.00	33.50	48.00	19.80	39.20	
2005	4.4	0.2	20.70	9.82	6.00	2.00	6.53	1.42

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Table 105. Number of fish and mean relative weight (Wr) for each length group of black bass collected in Lake Linville on 2 October 2012. Standard error is in parentheses.

Species	Length group					
	8.0-11.9 in		12.0-14.9 in		≥15.0 in	
Largemouth bass	No.	Wr	No.	Wr	No.	Wr
	121	83 (1)	32	85 (1)	13	91 (2)
	7.0-10.9 in		11.0-13.9 in		≥14.0 in	
Spotted bass	No.	Wr	No.	Wr	No.	Wr
	58	85 (1)	14	84 (1)	0	-

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Table 106. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 3.0 hours of 15-minute nocturnal electrofishing runs for black bass in Wood Creek Lake on 23 April 2012; standard error is in parentheses.

		Inch class																		
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	17	18	20	Total	CPUE
Dam	Largemouth bass						3	3	5	6	3	2	1	1		2		1	27	27.00 (9.98)
	Spotted bass	2	2	1	6	7	8	9	4	3	4	2							48	48.00 (12.11)
	Smallmouth bass					4	1												5	5.00 (5.00)
Pump	Largemouth bass		2	3	1	1	5	23	11	17	8	6	4	6	2	2			91	91.00 (16.52)
Station	Spotted bass		1	1	3	9	8	2	8	2	3	1							38	38.00 (10.13)
	Smallmouth bass														1				1	1.00 (1.00)
Dock	Largemouth bass		1	3	3	2	17	49	26	14	6	3	5	5	1	1	2		138	138.00 (41.23)
	Spotted bass				1	3	1	3	1	1									10	10.00 (6.22)
	Smallmouth bass																		0	0.00 (0.00)
Total	Largemouth bass		3	6	4	3	25	75	42	37	17	11	10	12	3	5	2	1	256	85.33 (19.41)
	Spotted bass	2	3	2	10	19	17	14	13	6	7	3							96	32.00 (7.05)
	Smallmouth bass					4	1								1				6	2.00 (1.67)

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Table 107. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Wood Creek Lake on 23 April 2012; 95% confidence limits are in parentheses.

Area	Species	No. ≥stock size	PSD	RSD[a]
Dam				
	Largemouth bass	24	29 (± 19)	13 (± 14)
	Spotted bass	30	20 (± 15)	0 (± 0)
Pump Station				
	Largemouth bass	79	25 (± 10)	5 (± 5)
	Spotted bass	24	17 (± 15)	0 (± 0)
Dock				
	Largemouth bass	112	15 (± 7)	4 (± 3)
	Spotted bass	6	0 (± 0)	0 (± 0)
Total				
	Largemouth bass	215	20 (± 5)	5 (± 3)
	Spotted bass	60	17 (± 10)	0 (± 0)

[a]Largemouth bass = RSD_{15}, spotted bass = RSD_{14}

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Table 108. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Wood Creek Lake during April 2012.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	13.67	4.55	57.00	15.18	11.00	2.52	3.67	0.92	0.33	0.33	85.33	19.41
2011	28.33	5.81	37.67	5.92	14.33	3.25	9.67	2.67	1.00	0.52	90.00	12.90
2010	27.50	9.21	43.00	11.33	33.50	5.23	14.00	2.83	2.50	1.05	118.00	26.58
2009	6.67	3.05	36.00	7.52	31.00	2.52	13.33	3.63	2.67	0.90	87.00	14.06
2008	6.67	3.60	44.67	6.78	15.33	2.69	14.33	2.38	2.00	0.78	81.00	12.25
2007	6.67	2.27	50.33	8.49	6.00	1.15	18.00	3.32	1.33	0.57	81.00	12.52
2006	30.33	6.97	24.33	6.20	10.00	2.06	20.67	5.02	2.00	1.04	85.30	17.50
2005	4.00	1.98	14.40	3.59	28.00	4.38	12.80	2.29	3.20	1.67	59.20	9.30

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Table 109. Spring electrofishing CPUE (fish/hr) for each length group of spotted bass collected at Wood Creek Lake during April 2012.

	Length group											
	<8.0 in		8.0-10.9 in		11.0-13.9 in		≥14.0 in		≥17.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2012	17.67	4.42	11.00	2.32	3.33	1.19	0.00	0.00	0.00	0.00	32.00	7.05
2011	16.33	4.22	9.00	2.79	2.67	1.24	0.00	0.00	0.00	0.00	28.00	7.30
2010	13.50	5.45	19.00	2.90	5.50	1.30	0.00	0.00	0.00	0.00	38.00	8.04
2009	16.67	4.89	15.67	3.39	3.33	0.96	0.33	0.33	0.00	0.00	36.00	6.46
2008	11.67	3.28	16.67	2.91	2.33	1.15	0.33	0.33	0.00	0.00	31.00	5.37
2007	14.67	3.86	20.67	3.84	6.67	1.58	1.67	1.04	0.00	0.00	43.67	7.52
2006	13.70	2.70	14.00	2.80	10.30	2.20	3.30	1.00	0.00	0.00	41.30	6.00
2005	8.80	2.90	13.60	5.50	15.20	2.80	4.40	1.30	0.00	0.00	42.00	10.20

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Table 110. Population assessment for largemouth bass based on spring electrofishing at Wood Creek Lake from 2005-2012.

Year		Mean length age-3 at capture	Spring CPUE age 1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Total score	Assessement rating
Management objectives		≥11.5 in	≥8.00 fish/hr	≥20.00 fish/hr	≥17.00 fish/hr	≥2.00 fish/hr		
2012	Value	11.4	4.33	11.00	3.67	0.33		
	Score	3	1	1	1	1	7	P
2011	Value	11.4	24.78	14.33	9.67	1.00		
	Score	3	2	1	2	2	10	F
2010	Value	11.4	15.09	33.50	14.00	2.50		
	Score	3	1	2	2	3	11	F
2009	Value	12.3	5.33	31.00	13.33	2.67		
	Score	4	1	2	2	3	12	G
2008	Value	12.3	5.67	15.33	14.33	2.00		
	Score	4	1	1	2	3	11	F
2007	Value	12.3	5.33	6.00	18.00	1.33		
	Score	4	1	1	3	2	11	F
2006	Value	12.3	11.83	10.00	20.67	2.00		
	Score	4	1	1	3	3	12	G
2005	Value	12.3	2.40	28.00	12.80	3.20		
	Score	4	1	2	2	3	12	G

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Table 111. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 3.0 hours of 15-minute nocturnal electrofishing runs for black bass in Wood Creek Lake on 25 September 2012; standard error is in parentheses.

Area	Species	Inch class																			Total	CPUE
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
Dam	Largemouth bass	4	3	5	2		3	2	3	7	7	3			1			1			41	41.00 (9.29)
	Spotted bass	7	7	2	1		1	8	4	2	2										34	34.00 (7.57)
	Smallmouth bass				2																2	2.00 (2.00)
Pump station	Largemouth bass	5	24	18	4	1		13	6	20	7	3		1		2	1				105	105.00 (28.49)
	Spotted bass	1	2	5		2	1	7	7	3	1	2									31	31.00 (13.00)
	Smallmouth bass								1		1										2	2.00 (1.15)
Dock	Largemouth bass		5	15	14	4	2	22	37	45	10	5	7	1	2				2	1	172	172.00 (50.68)
	Spotted bass		2	1	5	4	2	3	2	3	2	1									25	25.00 (8.06)
	Smallmouth bass																				0	0.00 (-)
Total	Largemouth bass	9	32	38	20	5	5	37	46	72	24	11	7	2	3	2	1	1	2	1	318	106.00 (23.98)
	Spotted bass	8	11	8	6	6	4	18	13	8	5	3									90	30.00 (5.27)
	Smallmouth bass				2				1		1										4	1.33 (0.75)

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Table 112. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in fall (September and October) electrofishing samples at Wood Creek Lake.

	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
Year Class	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2012	4.3	0.1	34.67	10.11	8.33	4.22		
2011 [a]	4.0	0.1	12.33	4.13	0.67	0.67	4.33[b]	1.59
2010	5.0	0.1	36.67	14.88	18.00	6.60	24.78	5.97
2009 [a]	3.7	0.4	2.67	1.66	0.67	0.45	15.09[c]	7.36
2008	3.8	0.1	13.33	3.24	1.00	0.72	5.33	2.67
2007	4.2	0.1	13.33	7.59	2.67	1.24	5.67	3.21
2006 [a]	4.4	0.3	3.70	1.74	0.70	0.45	5.33[d]	2.38
2005	4.0	0.1	23.70	11.90	3.33	1.38	11.83	4.37
2004	4.2	0.1	17.90	4.78	4.30	1.46	2.40	1.22

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[a] Age-0 largemouth bass stocked in the fall

[b] Includes fish stocked in fall 2011; CPUE stocked fish=1.00 fish/hr

[c] Includes fish stocked in fall 2009; CPUE stocked fish=10.00 fish/hr

[d] Includes fish stocked in fall 2006; CPUE stocked fish=0.33 fish/hr

Table 113. Number of fish and mean relative weight (Wr) for each length group of black bass collected at Wood Creek Lake during 25 September 2012. Standard error is in parentheses.

Species	Length group					
	8.0-11.9 in		12.0-14.9 in		≥15.0 in	
Largemouth bass	No.	Wr	No.	Wr	No.	Wr
	176	83 (1)	20	82 (1)	10	93 (3)
	7.0-10.9 in		11.0-13.9 in		≥14.0 in	
Spotted bass	No.	Wr	No.	Wr	No.	Wr
	43	93 (1)	8	91 (2)	0	-

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Table 114. Length frequency and CPUE (fish/nn) for each species of crappie collected at Wood Creek Lake in 24 net-nights during October 2012.

	Inch class											
Species	3	4	5	6	7	8	9	10	11	Total	CPUE	Std. error
White crappie	4	20	2	36	46	21	3	4	1	137	5.71	1.38
Black crappie	1	2	1		3		1			8	0.33	0.12

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Table 115. PSD and RSD_{10} values calculated for crappie collected in trapnets at Wood Creek Lake in October 2012; 95% confidence limits are in parentheses.

Species	No. >5.0 in	PSD	RSD_{10}
White crappie	113	26 (± 8)	4 (± 4)
Black crappie	5	20 (± 39)	0

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Table 116. Mean back calculated lengths (in) at each annulus for white crappie collected from Wood Creek Lake during 2012, including the 95% confidence interval (CI) for each mean length per age group.

		Age				
Year	No.	1	2	3	4	5
2011	14	4.3				
2010	6	4.9	6.9			
2009	10	4.3	6.4	7.9		
2008	7	4.2	6.2	7.3	8.3	
2007	3	4.1	5.8	6.5	6.8	7.3
Mean		4.3	6.4	7.5	7.8	7.3
Number		40	26	20	10	3
Smallest		3.5	5.5	6.2	6.4	6.8
Largest		5.3	8.1	9.4	10.0	7.8
Std error		0.1	0.1	0.2	0.4	0.3
95% CI ±		0.2	0.3	0.4	0.7	0.6

Otoliths were used for age-growth determinations; Intercept = 0
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Table 117. Mean back calculated lengths (in) at each annulus for black crappie collected from Wood Creek Lake during 2012, including the 95% confidence interval (CI) for each mean length per age group.

		Age			
Year	No.	1	2	3	4
2011	1	4.9			
2010	2	3.7	6.1		
2008	1	4.0	6.4	8.0	9.1
Mean		4.1	6.2	8.0	9.1
Number		4	3	1	1
Smallest		3.3	5.8	8.0	9.1
Largest		4.9	6.5	8.0	9.1
Std error		0.3	0.2		
95% CI ±		0.7	0.5		

Otoliths were used for age-growth determinations; Intercept = 0
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Table 118. Age-frequency and CPUE (fish/nn) of white crappie trap-netted at Wood Creek Lake in 24 net-nights in October 2012.

	Inch class												Std
Age	3	4	5	6	7	8	9	10	11	Total	%	CPUE	error
0	4	20								24	17.8	1.00	0.37
1+			2	36	9					47	34.8	1.96	0.67
2+					9	6	1			16	11.9	0.67	0.14
3+					9	8		4		21	15.6	0.88	0.16
4+					9	4	2		1	16	11.9	0.67	0.14
5+					9	2				11	8.1	0.46	0.12
Total	4	20	2	36	45	20	3	4	1	135	100.0	5.63	
%	3.0	14.8	1.5	26.7	33.3	14.8	2.2	3.0	0.7				

CPUE of ≥8.0 in (quality size) crappie = 1.17 fish/nn
CPUE of ≥10.0 in (preferred size) crappie = 0.21 fish/nn
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Table 119. Age-frequency and CPUE (fish/nn) of black crappie trap-netted at Wood Creek Lake in 24 net-nights in October 2012.

	Inch class								Std
Age	3	4	5	7	9	Total	%	CPUE	error
0	1	2	1			4	50.0	0.17	0.08
1+				1		1	12.5	0.04	0.02
2+				2		2	25.0	0.08	0.05
4+					1	1	12.5	0.04	0.04
Total	1	2	1	3	1	8	100.0	0.33	
%	12.5	25.0	12.5	37.5	12.5				

CPUE of ≥8.0 in (quality size) crappie = 0.04 fish/nn
CPUE of ≥10.0 in (preferred size) crappie = 0.00 fish/nn
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Table 120. Population assessment for white, black, and white and black crappie combined from Wood Creek Lake trapnet data collected in October 2012 (scoring based on statewide assessment).

	Species					
	White Crappie		Black crappie		Combined	
Parameter	Assessment value	Assessment score	Assessment value	Assessment score	Assessment value	Assessment score
CPUE of crappie (excluding age 0)	4.63	1	0.17	1	4.80	1
CPUE age 1	1.96	1	0.04	1	2.00	1
CPUE age 0	1.00	1	0.17	1	1.17	1
CPUE ≥8.0 in	1.17	1	0.04	1	1.21	1
Mean length age-2 at capture	8.1	1	7.1	1	8.1	1
Instantaneous mortality (Z)	0.297		0.114		0.306	
Annual mortality (A)	25.7		10.8		26.3	
Total score:		5		5		5
Assessment rating:		P		P		P

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Table 121. Number of fish and mean relative weight (Wr) for each length group of crappie collected in Wood Creek Lake in October 2012. Standard error is in parentheses.

	Length group					
	5.0-7.9 in		8.0-9.9 in		≥10.0 in	
Species	No.	Wr	No.	Wr	No.	Wr
White crappie	84	78 (1)	24	85 (8)	5	78 (5)
Black crappie	4	78 (3)	1	81 (-)	0	-

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EASTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Table 1 shows sampling conditions by water body for eastern fishery district lakes in 2012.

Buckhorn Lake

Length frequency, catch-per-unit-effort (CPUE) and population assessment based on early spring sampling for muskellunge in 2012 using daytime electrofishing at Buckhorn Lake (1,230 acres) are shown in Tables 2 and 3. Musky were sampled through 42 inches during electrofishing (Table 2). From 2004-2009 several assessment ratings were "Excellent", while from 2010-2012 they have been "Good" (Table 3). On 1 March 2010 the musky size limit in the lake changed from 40.0 in to 36.0 in. This has decreased CPUE of larger fish with a minor effect on the assessment rating. The $\log_{10}$ length-weight equation for muskellunge during 2012 sampling was $-4.36 + 3.51(\log_{10}$ length). A total of 300 muskellunge (12.7 in) were stocked during 2012. Production issues precluded stocking the normal 405 fish/year. The tailwater below Buckhorn Lake continues to provide an additional good muskellunge fishery. In 2013, muskellunge will be sampled in the early spring.

The black bass populations were sampled during the spring and fall (Tables 4-10). Weather related issues shortened sample time on both the spring and fall collections. Largemouth bass comprise the major black bass species in this lake and were sampled from 4.0-22.0 in (Table 4). An assessment value of "Fair" was observed for largemouth bass (Table 8). Due to low numbers of age-0 to age-1 fish, largemouth bass (4.5 in) have been supplementally stocked during October of 2005, 2006, 2008, and 2009. However, due to recently strong year classes of fish $\geq$ 5.0 inches (Table 10) largemouth bass have not been stocked from 2010-2012. Fish stocked in 2005 received a right pectoral fin clip, 2006 a left pectoral fin clip, 2008 a right pelvic fin clip, and 2009 a right pectoral fin clip for future identification.

Additional fish stocking occurred throughout the year at the tailwater area below the dam. Rainbow trout at 1,000 fish/mo were stocked in April, May, June, October, and November for a total of 5,000 fish in 2012.

Carr Creek Lake

The black bass population was sampled during the spring and fall at Carr Creek Lake (710 acres) in 2012 (Tables 11-17). The assessment rating for largemouth bass continued to be "Fair" in 2012, which it has nine of the last 11 years (Table 15). The reduced densities of largemouth bass are in large part due to poor recruitment of age-0 to age-1 fish. During the fall of each year from 2005-2011, largemouth bass were stocked to supplement low recruitment of age-0 to age-1 fish. Fish to be stocked in fall of 2012 were held and will be stocked in spring of 2013. This change will be watched to see if improved recruitment numbers wil occur versus the previous fall stocking routine. Also, fertilization will continue with 9-18-9 liquid fertilizer to aid recruitment success of young-of-the-year fish. Additionally, hydrilla will be monitored and control measures applied. Work will continue in cooperation with the local USACE office on habitat improvement projects including brush piles, Christmas tree reefs, native aquatic plant restoration and cypress tree plantings, hinge cut trees, and wood pallet structures.

Spring daytime electrofishing was completed during March for walleye. Tables 18-20 list length frequency, CPUE, age frequency, and population assessment for walleye. The reason for the decreased CPUE during some of the recent years (Table 18) is that effort has increased substantially in order to collect enough broodstock. This results in sampling parts of the lake multiple times and sampling areas that are less productive. The fishery continues to have an assessment of "Good" (Table 20) and anglers pursue these fish. In 2004 there was a fish kill of 100+ large adult walleye at Carr Creek Lake, in 2005 a fish kill of large adult alewife, and in 2008 a fish kill of large gizzard shad. None of these fish kills have seemed to significantly impact the fishery. An estimated 18,018 walleye (1.6 in) were stocked in May.

Data for black and white crappie sampled during spring electrofishing is presented in Tables 21-24. Due to very poor fall trap netting catches, spring electrofishing was initiated in 2007. This will continue to be used to monitor the population. The fishery has a special 9.0 minimum size regulation. Total CPUE of black and white crappie combined has been approximately 25.00 fish/hr the last two years (Table 22). This is approximately double the catch rate of fish from 2008-2010. Additionally, there are more keeper-size fish collected during electrofishing now than in previous years. Approximately 7,100 black crappie and blacknose black crappie (3.0 in) were stocked in November 2007. Some of these blacknose crappie were observed in angler catches in 2009 and were legal size fish. During the fall of 2009 a research study was initiated on white crappie recruitment. Totals of 5,440, 9,676, 3,822, and 17,814 white crappie were stocked in 2009, 2010, 2011, and 2012, respectively.

Cranks Creek

Spring and fall electrofishing was completed at Cranks Creek Lake (219 acres) for black bass in 2012. Tables 25-31 provide data from spring and fall sampling. An assessment rating of "Fair" (Table 29) was observed for largemouth bass. The assessment value of 12 for largemouth bass was consistent with previous years. Spring electrofishing CPUE for largemouth bass was down slightly from last year but numbers were still above average across length groups (Table 26). The CPUE of age-0 largemouth bass collected in the fall has remained consistent (Table 31) and supplemental stocking of largemouth bass did not occur in 2012.

Due to clear water at this lake, brittle naiad has become a nuisance in shallow areas. Reward herbicide is applied periodically to clear boat ramp access and bank fishing access sites. A total of 2,692 channel catfish were stocked in the lake in July. Rainbow trout were stocked at 1,500/mo during January, April, May, and October for a total of 6,000 fish.

Dewey Lake

Black bass were sampled at Dewey Lake (1,100 acres) in the spring and fall of 2012 (Tables 32-38). Spring sampling collected largemouth bass from 3.0 – 21.0 in (Table 32). The lake currently has a very high number of largemouth bass from 12.0-14.9 in (Table 33). This will work to improve the low numbers of fish over 15.0 inches in the near future. Fish over 20.0 in remain stable compared to previous years. The largemouth bass assessment rating improved from "Poor" in 2010 to "Fair" in 2012 (Table 36). During October, a total of 909 largemouth bass fingerlings (4.5 in) were stocked to supplement 2012 recruitment numbers.

Black and white crappie were sampled by trap nets for 20 net-nights during the fall. Data is listed in Tables 39-46 for crappie. Both black and white crappie populations are doing well. There are numerous large keeper fish. Black crappie were collected at a CPUE of 16.25 fish/nn and white crappie at 31.00 fish/nn (Table 39). Assessment ratings were "Good" for white crappie (Table 45) and "Fair" for black crappie (Table 46). Maximum size collected was approximately 10.0 and 14.0 inches for black and white crappie, respectively.

Additional fish stockings other than largemouth bass included blue catfish and rainbow trout. A total of 11,150 blue catfish (3.0-5.0 in) were stocked in the lake during March. Rainbow trout were stocked in the tailwater of Dewey Lake in April, May, October, and November (4,000 total; 8.0-12.0 in).

Fishtrap Lake

Black bass were sampled in the spring and fall (Tables 47-53). Spring sampling required multiple sample dates to acquire suitable water conditions. Largemouth bass were sampled from 3.0-21.0 in (Table 47) and the assessment value was "Good" (Table 51). With age 0 fish slightly lower than average numbers (Table 53), a total of 17,269 largemouth bass (4.5 in) were stocked in October. Smallmouth bass were not collected in sufficient number to assess in 2012. However, the smallmouth bass fishery remains good as reported by anglers and the 2011 assessment from electrofishing data was "Good".

Approximately 23,035 hybrid striped bass (2.0 in) were stocked in the lake during the month of June. A total of 20,050 redear sunfish (1.7 in) were stocked for utilizing the introduced zebra mussels for food. During 2013, blue catfish will be stocked for additional predation on zebra mussels. Approximately 20,050 native walleye advanced fingerlings (1.4 in) were stocked in the Levisa Fork upstream of Fishtrap Lake. One day was utilized to electrofish Levisa Fork River from Nigh to Toonerville, KY for walleye and collected fish were pit tagged for future identification. Rainbow trout totaling 10,000 were stocked in the tailwater. A new stocking tube was constructed at the stilling basin area of tailwater to aid in trout stockings. A total of 10,000 rainbow trout are stocked at the tailwater each year during 5 different months.

Highsplint Lake

Day time electrofishing was utilized during April for evaluating the largemouth bass population. Tables 54-56 contain CPUE, PSD, and RSD values. The CPUE was similar to small lakes in eastern Kentucky with a 12.0 in minimum length limit. Samples of largemouth bass show high numbers up to 12.0 in with very low numbers of fish greater than 12.0 in. Fish were sampled from 5.0-17.0 in total length. During 2013 the largemouth bass population will be sampled again for further assessment.

Several habitat sites and fish stockings were completed during 2012. Three hardwood brushpiles were placed in the lake for fish habitat. During July approximately 750 channel catfish (7.0-12.0 in) were stocked and in September a total of 1,300 redear sunfish (1.5-4.0 in) were stocked. One stocking of rainbow trout occurred in October totaling 1,500 fish. Future annual stockings will consist of rainbow trout at 750 in February, 1,500 in March, and 1,500 in October and 700 channel catfish will be stocked in August.

This lake has a possibility to furnish cold water habit to sustain trout through the summer. Water quality readings were examined on 15 August 2012. A portion of the lake was found to have a depth of 67 feet. This area held a thermocline at approximately 27-35ft with sufficient dissolved oxygen (5.45-4.55ppm) and water temp (72-65F). From 40-67ft dissolved oxygen was poor ranging from 1.44-0.78ppm. Where this area of the lake was confined to a small area, it is possible to hold trout during the summer. However, the number that would hold-over is unknown at this time. This will be examined further along with additional water quality data.

Martins Fork Lake

Martins Fork Lake (330 acres) was sampled for black bass in the spring and fall of 2012 (Tables 57-63). The assessment score has remained "Fair" for largemouth bass from 2003 – 2012 (Table 61). However, periodical, below average young-of-year classes will be supplemented with stocking of fingerling fish in the fall. Growth rates of bass have been good which is due to the somewhat lower densities of fish as compared to other lakes. During fall sampling, coosa, smallmouth, spotted, and largemouth bass were collected (Table 62). Spotted and largemouth bass make up the primary black bass fishery. During 2012 largemouth bass were observed up to 23.0 in (Table 57) and spotted bass up to 15.0 in (Table 62).

The erie strain walleye have not been stocked since 2004. This fishery has declined in numbers to where none have been sampled by electrofishing from 2010-2012. Law enforcement officers also noted no walleye being caught from the lake from 2011-2012. Current hatchery production plans will have native strain walleye being stocked in 2013.

Fish stockings did not include largemouth bass in 2012, but did include channel catfish and rainbow trout. A total of 4,902 channel catfish were stocked in the lake in July. Rainbow trout were stocked at the tailwater throughout the year for an approximate total of 4,500 fish. To assist anglers and provide fish habitat, a total of 21 trees were hinge-cut around the shoreline area of the lake.

Paintsville Lake

Spring and fall sampling was completed during 2012 for black bass (Tables 64-71). Largemouth bass were observed from 3.0-23.0 in during spring sampling (Table 64). The 12.0-15.0 in protective slot length limit (implemented in 2002 for largemouth and smallmouth bass) has not made any significant change in largemouth bass numbers under 12.0 in. All largemouth bass length groups have remained fairly consistent in recent years (Table 65). An assessment value of "Fair" was observed for largemouth bass (Table 68). Table 70 contains fall data for age and growth of largemouth bass. Growth rates are comparable to other eastern Kentucky lakes. During 2006, smallmouth bass were removed from the 12.0-15.0 in protective slot length limit and placed under an 18.0 in minimum length limit. Also, water quality parameters have prevented smallmouth bass from ever developing a good fishery in the 1,150 acre lake. During 2006, water withdrawals from the lake were altered to avoid pulling water from the preferred smallmouth bass, trout, and walleye cool water habitat. A total of 32,000 (2.0 in) smallmouth bass were stocked on May 28 finishing 5 consecutive years of stocking. During this study smallmouth bass numbers have slightly increased in electrofishing samples, but not significantly enough to develop a good fishery.

Walleye and white crappie were not sampled during 2012. One day was utilized for boat electrofishing to acquire walleye broodfish for the hatchery. However, this sampling did not provide sufficient data for analysis of the walleye or crappie populations. During fall black bass sampling, it was noted that many age 1 and 2 walleye were observed. This is a good indicator that the last two walleye stockings are recruiting well as it is rare to see age 1 or 2 fish during fall bass electrofishing. Approximately 20,546 blacknose crappie (2.5-3.5 in) were stocked in the lake in November 2011 and another 36,000 on November 20 of 2012. Walleye (n=58,108, mean length=1.6 in) were stocked on 9 May 2012.

Additional fisheries provided by the lake are the brown and rainbow trout fisheries found in the tailwater area below the dam and a rainbow trout fishery in the lake. Approximately 16,000 rainbow trout were stocked in the tailwater from April to November and 300 brown trout were stocked in the tailwater in April 2012. Rainbow trout stocked in the lake totaled approximately 13,000 fish. Occasional tailwater stockings during the summer provide extra rainbow trout and result from other eastern Kentucky stocking locations becoming too warm and alternate sites are necessary.

Pan Bowl Lake

Tables 72-76 contain spring electrofishing data obtained for largemouth bass. Historically this lake has had widespread growth of miscellaneous aquatic vegetation. During recent years, Eurasian milfoil has become established and this plant had effectively filled in most open water areas of the lake by 2010. Eurasain milfoil observed from 2011-2012 had finally decreased in density. Some limited chemical application was conducted in 2010 to lessen areas of heavy plant growth. Also during 2010, approximately 20 grass carp were stocked in the lake for vegetation reduction. With reduced plant density it is believed that largemouth bass will feed more effectively on the stunted sunfish. During 2011, no chemical applications were conducted for aquatic vegetation control. In 2012 one application of Sculpin G was applied in the vicinity of the boat ramp and courtesy dock accessed from Pan Bowl Lake road. The 2012 assessment rating for largemouth bass was "Fair" (Table76). However, the assessment value has slowly decreased over the last several years. For 2013, the largemouth bass population will be re-evaluated to assess if there are any improvements.

Management at this 98 acre lake also includes an every other year stocking of channel catfish (9.0 in) and periodic spring electrofishing for bluegill and redear sunfish. During 2012, approximately 2,000 channel catfish were stocked. Largemouth bass will be evaluated via spring electrofishing in 2013.

Pikeville City Lake

Pikeville City Lake (20 acres) has primary fisheries of largemouth bass, bluegill, white crappie, common carp, and channel catfish. There are some secondary fish in low numbers consisting of drum, flathead catfish, warmouth, and redhorse species. This lake is fertile, which is not common in most lakes of the eastern district and is heavily populated with gizzard shad.

During the summer, oxygen is added to the lake by 1 to 4 aerators as needed to prevent fish kills. The largemouth bass fishery has been very good for big fish for many years. On 1 March 2006, a regulation of catch-and-release-only for largemouth bass went into effect. Electrofishing was conducted on 3 April 2012 for largemouth bass. Tables 77-79 contain information from the April daytime electrofishing sample for bass. The early sample date affected numbers of bass on shoreline and future sampling will be directed toward the 2nd half of April. Angler reports on bass catches and size distribution were similar in 2012 to previous years. The PSD and RSD values of 86 and 77 respectively (Table 79) are very high, but influenced by a poor sample. Respective values of approximately 60 and 45 have been observed in prior years. With the catch-and-release-only regulation for largemouth bass, a PSD of 60+ and RSD of 40+ have been expected.

Yatesville Lake

Black bass were sampled during the spring and fall (Tables 80-87). Although the largemouth bass population at Yatesville Lake (2,280 acres) receives a great amount of fishing pressure (resident and nonresident) through tournaments on the weekends, it has remained consistent. The assessment for 2012 of "Fair" was down from a "Good" rating in 2011. However, this was due to low numbers of age 1 fish and there was no difference in large fish numbers. Approximately 23,000 fingerling largemouth bass (4.5 in) were stocked in October to supplement young-of-year fish numbers.

White crappie were sampled in the fall by trap nets (Tables 88-92). Size distribution of fish sampled ranged from 3-14.0 in and from 0-8 years in age (Table 91). An assessment score of 12 "Fair" was observed for the white crappie population (Table 92). Mean length of age 2+ fish has improved compared to 2009 (Table 92), which is good versus stunting and reduced growth. This fishery will be reevaluated in 2014.

Additional work during 2012 consisted of several fish stockings and some habitat work. The lake was stocked with 20,000 redear sunfish (1.7 inch) during September. Rainbow trout were stocked in the tailwater of Yatesville Lake throughout the year (2,250 fish total). New fish habitat was added with 1 Christmas tree brushpile, 1 Christmas tree reef refurbished, and 9 trees hinge-cut. During 2013, fish sampling and habitat work will continue at Yatesville Lake. Black bass will be sampled in the spring and fall. Habitat work will primarily consist of selective cutting of cedar trees from the Yatesville Lake WMA property to create brush piles and the addition of Christmas tree brushpiles. This habitat should improve the recruitment for all of the lake's sportfish.

Table 1: Summary of 2012 sampling conditions by waterbody, species sampled and date.

Water body	Species	Date	Time (24hr)	Gear	Weather	Water Temp (°F)	Water level (elev ft)	Secchi (in)	Pertinent sampling comments[a,b]
Buckhorn Lake	Musky	2/23	1100	shock	partly cloudy, w indy	42.5-46	760.60	10	cond: 301; used 2 boats; w hole lake; LFR assissted
Buckhorn Lake	LMB	5/8	2000	shock	rainstorms	76.5	782.10	108	cond: 391; bp: 29.86; used 2 boats; w hole lake
Buckhorn Lake	LMB	9/25	2000	shock	cloudy, rainstorms	71.5	782.20	42	cond: 580; upper lake; used 1 boat
Carr Creek Lake	WE/WC/BC	3/8	1000	shock	cloudy, w indy, rain	50.0	1017.20	38	cond: 366; used 2 boats; w hole lake; w ater clear; w alleye broodstock collection
Carr Creek Lake	LMB	5/9	2000	shock	rain/cloudy	76.0	1028.3	63	cond: 630; used 2 boats; w hole lake
Carr Creek Lake	LMB	10/10	2000	shock	cloudy/rain	67.0	1024.50	66	cond: 613; bp: 30.05; used 1 boat; w hole lake;
Cranks Crk Lake	LMB	4/11	2000	shock	sunny, w indy	61.0			cond: 180; clear w ter
Cranks Crk Lake	LMB	10/4	2000	shock	clear/sunny	62.5		128	cond: 172; used 1 boat; w hole lake; w ater clear
Dew ey Lake	LMB	4/17	2000	shock	cloudy	65.0	650.42	42	cond: 611; bp: 30.27 used 2 boats; w hole lake; w ater murky
Dew ey Lake	LMB	9/11	2000	shock	clear	81.0	650.46	18-48	used 2 boats; w hole lake; w ater murky, calm
Dew ey Lake	WC/BC	11/13	1000	trap net	sunny	53.0	648.18		upper lake; lake level falling; outflow : 159CFS
Dew ey Lake	WC/BC	11/14	1000	trap net	sunny	47.0	648.01		upper lake; lake level falling; outflow : 159CFS
Dew ey Lake	WC/BC	11/15	1000	trap net	sunny	45.0	647.85		upper lake; lake level falling; outflow : 157CFS
Fishtrap Lake	LMB/SMB	4/23	2000	shock	partly cloudy	62.5	757.66	98	cond: 489; stopped after 2 runs due to rain/poor sampling
Fishtrap Lake	LMB/SMB	5/15	1000	shock	cloudy	77.0	757.47	90	cond: 567; bp: 30.04; used 1 boat w / 1 dipper; w ater clear, calm
Fishtrap Lake	LMB/SMB	9/17	2000	shock	rain	77.0	757.13	56	cond: 641; bp: 30.04; w hole lake
Hambley	LMB	4/3	1000	shock	partly cloudy	68.0			cond: 446
Highsplint Lake	LMB	4/4	1230	shock	cloudy/rain	68.0		168	cond: 266; checked max depth - 60 ft. w / depth finder
Highsplint Lake		8/15	1230	YSI	rainy	81.0		168	cond: 306; lake profile; w ater quality (temp. and D.O.)
Martins Fk Lake	LMB	5/10	2000	shock	sunny	73.5		86	cond: 190; used 1 boat; w hole lake
Martins Fk Lake	LMB	9/12	2000	shock	sunny	80.0	1310.00	48	cond: 174; used 1 boat; w hole lake
Paintsville Lake	LMB/SMB	4/10	2000	shock	partly cloudy	61.0	709.17	41	cond: 118; used 3 boats; BBR assisted; w hole lake; w ater murky
Paintsville Lake	LMB/SMB	10/15	2000	shock	partly cloudy, w indy	64.0	709.76	152	cond: 142; used 1 boat; w ater clear; poor conditions (stopped after 2 runs)
Paintsville Lake	LMB/SMB	10/16	2000	shock	calm	65.0	709.73	152	bp: 30.04; used 2 boats; w hole lake
Pan Bow l Lake	LMB	4/12	1000	shock	sunny, cool	60.0			bp: 30.29; used 1 boat; w hole lake; 7.5 minute runs
Yatesville Lake	LMB	5/16	2000	shock	sunny	71-76	630.60	45-75	cond; 157; bp: 29.98; used 1 boat; w hole lake (10 runs)
Yatesville Lake	LMB	10/2	2000	shock	clear	69.5		48	cond; 171; used 1 boat; w hole lake (5 runs); w ater calm/clear
Yatesville Lake	WC	11/19	1000	trap net	partly cloudy	45.0	626.76		upper lake; lake level falling; outflow : 142CFS; bp: 30.35
Yatesville Lake	WC	11/20	1000	trap net	clear	45.0	626.58		upper lake; lake level falling; outflow : 141CFS; bp: 30.15
Yatesville Lake	WC	11/21	1000	trap net	clear	47.0	626.47		upper lake; lake level falling; outflow : 141CFS; bp: 30.18

[a] cond = conductivity in µS/cm

[b] bp = barometric pressure in inches

Table 2. Length frequency and electrofishing CPUE (fish/hr) of muskellunge collected during spring sampling on Buckhorn Lake from 1998-2012; numbers in parentheses are standard errors. Results from 2002 are from fall electrofishing.

	Inch class																																						
Year	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	Total	CPUE
1998	1	1	2	7	4	1	1				1	4	3	1	1	1						1		1	1			1	1										33	6.60 (2.90)
1999		1	1	2	3	3	1			1	3	6	6	11	4	4	3				3	2	1		2	1		1											59	10.90 (4.40)
2000		1	3	2	3	1								4				1	2		7	1		1	1			2	1				1						31	8.20 (0.50)
2001					4	1	1				1			1									1		1	1		1									1		13	3.20 (0.70)
2002							1							2	1						3	1		1			2				1								12	6.00 (0.80)
2003	1		5	2	1	1									2	1	1		1	1	2	1	1				1									1			22	7.10 (1.90)
2004			2	9	23	16	2				1		6	7	19	9				3	5	6	6	6	4	5	7	5	8	3	1	1					1		155	16.70 (2.10)
2005					4	5	2					1		2	2							1			1			2	1	1	3		1				1		27	6.30 (1.70)
2006			1	8	10	6								1	2	3						1	1		1	3	2	1	1	1	1	1	1						45	14.20 (2.20)
2007					1	1	2	1					2	3	6	2		1			1		2		1	2		1	2		1	1				1		1	32	13.66 (4.51)
2008				2	6	10	6	1						1	1	3				1		1	5	2			1				1			1			1		43	8.27 (1.61)
2009	1			2	4	11	12	6					1		1	3	2	3	1	1		1	1	4	3	3	3		1		2				1		1		68	17.58 (3.36)
2010			1	4	13	18			1	1	1	1		6	6	10	6	1		2	3	2	1	3	2	1	2	1	4	3	1	1					1		96	12.86 (1.57)
2011			4	5	17	14	3					2		3	3	1				1		3	1	3		3	2	1	1		1			1					69	12.55 (2.66)
2012		1		1	8	20	2					1	2	1	6	1	1					1		2		1	3	2	2	1			1						57	13.41 (1.81)

EFDBLMSS.D98-D10, D12

LFRBHLSP.D11

Table 3. Population assessment for muskellunge from Buckhorn Lake (1,230 acres) captured during spring electrofishing from 1999-2012. Assessment scores for 2002 were derived from fall electrofishing data. Actual values are in parentheses. Scoring based on statewide assessment

	Population Assessment													
Parameter	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
CPUE age 1	2 (2.03)	2 (2.70)	1 (1.50)	1 (0.50)	2 (3.30)	3 (5.90)	2 (2.50)	3 (7.90)	1 (1.71)	3 (4.81)	4 (9.31)	3 (5.09)	3 (7.82)	3 (7.53)
CPUE ≥ 20.0 in	3 (8.50)	3 (5.40)	1 (1.70)	3 (5.50)	2 (3.90)	4 (11.10)	2 (3.70)	3 (6.30)	4 (11.98)	2 (3.83)	3 (7.68)	3 (7.77)	2 (4.73)	3 (5.88)
CPUE ≥ 30.0 in	2 (1.80)	3 (3.80)	1 (1.20)	4 (4.00)	2 (2.00)	4 (6.30)	3 (2.60)	4 (4.40)	4 (5.32)	2 (2.17)	4 (4.65)	3 (3.37)	3 (2.91)	3 (3.06)
CPUE ≥ 36.0 in	1 (0.20)	3 (1.00)	2 (0.50)	4 (1.50)	2 (0.65)	4 (2.80)	4 (2.10)	4 (2.50)	4 (2.45)	2 (0.60)	4 (1.81)	4 (1.71)	3 (1.09)	4 (2.12)
CPUE ≥ 40.0 in	0 (0.00)	2 (0.20)	3 (0.30)	3 (0.50)	3 (0.30)	3 (0.30)	4 (1.10)	4 (1.00)	4 (1.55)	3 (0.48)	4 (1.04)	3 (0.37)	3 (0.36)	2 (0.24)
Total score	8	13	8	15	11	18	15	18	17	12	19	16	14	15
Assessment rating	Fair	Good	Fair	Good	Fair	Excellent	Good	Excellent	Excellent	Good	Excellent	Good	Good	Good

EFDBLMSS.D99-D10, D12
LFRBHLSP.D11

Table 4. Species composition, relative abundance and CPUE (fish/hr) of black bass collected in approximately 2.0 hours of 15-minute electrofishing samples at Buckhorn Lake (1,230 acres) on 8 May 2012; numbers in parentheses are standard errors.

		Inch class																					
Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE
Upper	Smallmouth bass																					0	0.00 (0.00)
	Largemouth bass		1	7	14	1	4	4	6	3	4	2	2	2	1						1	52	52.00 (6.73)
Lower	Smallmouth bass					1																1	1.00 (1.00)
	Largemouth bass	1	8	15	12	6	6	15	9	6	1	3	3	2	1							88	88.00 (7.48)
Total	Smallmouth bass					1																1	0.50 (0.50)
	Largemouth bass	1	9	22	26	7	10	19	15	9	5	5	5	4	2						1	140	70.00 (8.25)

EFDBLLSS.D12

Table 5. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Buckhorn Lake (1,230 acres). SE=standard error.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2003	22.67	3.53	18.67	2.33	28.33	3.76	6.33	1.15	0.00	0.00	76.00	6.89
2004	38.00	6.20	51.67	6.52	29.33	4.19	4.33	1.15	0.00	0.00	123.33	11.55
2005	17.00	3.49	45.00	5.12	38.33	5.49	8.33	1.15	0.33	0.33	108.67	7.86
2006	14.17	2.18	35.24	4.62	40.51	5.06	15.22	3.40	0.33	0.33	105.14	10.97
2007	14.50	4.27	26.00	2.73	20.50	3.33	14.00	2.39	0.50	0.50	75.00	6.04
2008	14.79	5.47	27.01	7.24	21.35	3.31	13.82	1.75	0.00	0.00	76.97	11.95
2009	41.16	3.54	32.03	7.71	17.18	4.84	14.45	3.03	0.00	0.00	104.82	13.16
2010	21.18	4.47	31.78	6.63	18.32	3.74	10.68	2.61	0.38	0.38	81.97	11.73
2011	no sample											
2012	32.50	6.34	26.50	5.34	7.50	0.91	3.50	1.18	0.50	0.50	70.00	8.25

EFDBLLSS.D02-D10, D12

Table 6. PSD and RSD values for each species of black bass in each area of Buckhorn Lake (1,230 acres) on 8 May 2012. Number of fish (No.) is the number of stock-size or larger fish collected and numbers in parentheses are 95% confidence intervals.

	Largemouth bass			Smallmouth bass		
Area	No.	PSD	RSD_{15}	No.	PSD	RSD_{14}
Lower	29	41 (23-60)	14 (1-27)			
Upper	46	22 (10-34)	7 (0-14)	1	0	0
Total	75	30 (20-40)	9 (3-16)	1	0	0

EFDCLLSS.D12

Table 7. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Buckhorn Lake (1,230 acres) from 2003-2012.

	Year								
Age	2003	2004	2005	2006	2007	2008	2009	2010	2012
1	19.17	35.50	16.25	11.19	13.00	11.19	43.76	26.10	36.06
2	19.92	53.33	42.42	36.41	25.25	28.73	25.94	24.30	20.61
3	17.80	17.38	30.13	24.14	13.83	14.12	19.42	20.99	9.56
4	9.81	9.75	9.56	14.66	7.87	7.74	10.96	5.41	3.27
5	4.93	4.73	5.83	9.41	7.58	7.22	0.53	0.80	
6	1.71	1.64	2.15	5.02	3.47	4.41	2.11	2.38	
7	1.33	0.67	2.00	3.65	2.50	3.18	0.53	0.80	

EFDBLLSS.D03-D10, D12
EFDBLLAS.D04
EFDBLLAS.D09

Table 8. Population assessments for largemouth bass collected during spring at Buckhorn Lake (1,230 acres). Actual values are in parentheses. Scoring based on statewide assessment.

	Year								
Parameter	2003	2004	2005	2006	2007	2008	2009	2010	2012
Mean length age 3 at capture	4 (12.6)	4 (12.6)	4 (12.6)	4 (12.6)	4 (12.6)	4 (12.6)	4 (13.3)	4 (13.3)	4 (13.3)
Spring CPUE age 1	1 (19.20)	2 (35.50)	1 (16.30)	1 (11.20)	1 (13.00)	1 (11.19)	3 (43.76)	2 (26.10)	3 (36.06)
Spring CPUE 12.0-14.9 in	3 (28.33)	3 (29.33)	4 (38.33)	4 (40.51)	2 (20.50)	2 (21.35)	2 (17.18)	2 (18.32)	1 (7.50)
Spring CPUE ≥15.0 in	2 (6.33)	2 (4.33)	2 (8.33)	3 (15.22)	3 (14.00)	3 (13.82)	3 (14.45)	2 (10.68)	1 (3.50)
Spring CPUE ≥20.0 in	0 (0.00)	0 (0.00)	2 (0.33)	2 (0.33)	2 (0.50)	0 (0.00)	0 (0.00)	2 (0.38)	2 (0.50)
Total score	10	11	13	14	12	10	12	12	11
Assessment rating	Fair	Fair	Good	Good	Good	Fair	Good	Good	Fair
Instantaneous mortality (z)	0.61	0.85	0.67	0.48	0.45	0.42	0.64	0.73	0.77
Annual mortality (A)	45.60	57.20	48.70	38.00	36.40	34.20	47.40	51.80	54.90

EFDBLLSS.D03-D10, D12
EFDBLLAS.D04
EFDBLLAS.D09

Table 9. Length frequency and CPUE (fish/hr) of black bass collected in approximately 1.0 hours of 15-min nocturnal electrofishing runs at Buckhorn Lake (1,230 acres) on 25 September 2012; numbers in parentheses are standard errors.

Area	Inch class															
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	Total	CPUE	
Upper																
LMB	3	3	12	13	8	3	6	12	4	6	6	2	1	79	79.00	(7.90)
Lower																
no samples														0		
Total																
LMB	3	3	12	13	8	3	6	12	4	6	6	2	1	79	79.00	(7.90)

LMB = largemouth bass
EFDBLLSF.D12

Table 10. Indices of year class strength at age-0 and age-1 and mean lengths (in) of age-0 largemouth bass at Buckhorn Lake (1,230 acres) from electrofishing. CPUE=fish/hr, SE=standard error.

	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
Year class	Mean length	SE	CPUE	SE	CPUE	SE	CPUE	SE
2002	4.5	0.1	99.30	7.40	38.70	2.60	19.20	3.30
2003	4.7	0.5	106.00	13.80	39.70	4.60	35.50	5.40
2004	3.6	0.0	176.70	34.00	9.30	4.60	16.25	3.50
2005	4.0	0.2	44.70	6.60	10.00	3.50	11.19	2.10
2006	4.2	0.2	17.60	4.10	5.30	1.90	13.00	3.74
2007	4.5	0.2	18.78	6.43	9.59	3.44	11.19	3.77
2008	4.9	0.1	21.44	3.68	9.91	2.31	43.76	3.48
2009	no fall sample						26.10	5.16
2010	4.3	0.1	67.00	5.00	22.50	5.75	no spring sample	
2011	4.5	0.1	126.67	26.69	42.00	9.95	36.06	6.46
2012	5.0	0.2	39.00	9.57	21.00	7.19		

EFDBLLSF.D02-D08, D10-D12
EFDBLLAS.D04
EFDBLLAS.D09
EFDBLLSS.D03-D10, D12

Table 11. Species composition, relative abundance and CPUE (fish/hr) of black bass collected in approximately 2.0 hours of 15-minute electrofishing samples at Carr Creek Lake (710 acres) on 9 May 2012; numbers in parentheses are standard errors.

		Inch class																						
Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	
Upper	Smallmouth bass						1															1	1.00	(1.00)
	Spotted bass				1	6	1	3	1	2				1	1							16	16.00	(9.09)
	Largemouth bass	1	3	2	4	4	6	7	6	7	3	2	3	2	3	2	4	1	1			61	61.00	(14.96)
Lower	Smallmouth bass			1		1		1		1												4	4.00	(4.00)
	Spotted bass			1	2	2	4	3	1		1	4	1	1								20	20.00	(7.48)
	Largemouth bass	1	2	7	4	2	5	6	4	2	4	3	3	3	3	3	1	2		1	1	57	57.00	(10.88)
Total	Smallmouth bass			1		1	1	1		1												5	2.50	(1.99)
	Spotted bass			1	3	8	5	6	2	2	1	4	1	2	1							36	18.00	(5.50)
	Largemouth bass	2	5	9	8	6	11	13	10	9	7	5	6	5	6	5	5	3	1	1	1	118	59.00	(8.41)

EFDCLLSS.D12

Table 12. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Carr Creek Lake (710 acres) from 2002-2012. SE=standard error.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2002	116.33	14.24	16.89	1.71	12.33	1.57	7.11	1.16	0.00		152.67	13.32
2003	67.56	11.32	15.89	2.18	11.11	1.46	10.67	1.50	0.44	0.26	105.22	14.37
2004	135.00	17.73	24.44	5.31	8.44	1.37	9.00	1.16	0.22	0.15	176.89	18.81
2005	20.00	2.70	19.80	1.60	24.80	2.40	14.00	1.80	0.33	0.30	78.60	4.90
2006	22.26	6.95	30.90	4.80	27.92	3.34	29.90	3.11	0.67	0.45	111.00	10.20
2007	7.95	1.85	20.78	4.65	18.59	3.42	15.72	3.64	0.49	0.49	63.03	5.49
2008	2.99	1.25	16.36	2.57	24.72	5.39	23.71	3.31	0.50	0.50	67.78	8.44
2009	5.14	0.74	10.29	2.60	17.14	2.99	16.00	3.38	0.57	0.57	48.57	6.14
2010	13.81	3.21	10.75	2.58	10.80	2.11	12.55	3.47	0.94	0.63	47.90	4.83
2011	11.00	4.39	10.50	2.61	5.50	1.30	16.00	4.54	1.00	1.00	43.00	9.79
2012	15.00	3.09	21.50	3.46	9.00	1.46	13.50	3.46	1.50	0.73	59.00	8.41

BBRPSCFL.D02-D05
EFDCLLSS.D06-D10, D12

Table 13. PSD and RSD values for each species of black bass in each area of Carr Creek Lake (710 acres) on 9 May 2012. Number of fish (No.) is the number of stock-size or larger fish collected and numbers in parentheses are 95% confidence intervals.

	Largemouth bass			Smallmouth bass			Spotted bass		
Area	No.	PSD	RSD_{15}	No.	PSD	RSD_{14}	No.	PSD	RSD_{14}
Lower	41	59 (43-74)	34 (20-49)	3	33 (0-99)	0	17	41 (17-65)	12 (0-28)
Upper	47	44 (30-59)	28 (15-41)	1	0	0	15	27 (4-50)	13 (0-31)
Total	88	51 (40-62)	31 (21-40)	4	25 (0-74)	0	32	34 (18-51)	13 (1-24)

EFDCLLSS.D12

Table 14. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Carr Creek Lake (710 acres) from 1999-2012.

	Year													
Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
1	129.60	66.90	160.40	114.40	66.20	133.70	18.84	21.10	7.61	2.43	3.14	9.95	9.00	13.19
2	31.80	21.20	16.10	17.30	17.10	25.20	20.82	31.70	21.07	13.11	7.90	7.59	7.67	16.81
3	17.00	17.30	13.40	11.90	6.90	5.40	14.27	14.20	11.97	20.12	14.92	11.50	7.32	11.99
4	16.10	18.30	20.10	7.20	6.90	5.70	13.24	21.30	9.95	21.11	9.97	9.41	7.14	6.90
5	12.00	10.60	8.20	1.30	3.20	2.50	4.44	8.90	3.91	6.41	6.44	3.13	6.46	4.69
6	2.70	4.00	2.70	0.40	0.00	0.00	0.00	0.00	0.00	3.60	3.90	1.79	2.92	2.92
7	0.60	0.30	0.70		2.10	1.80	2.73	5.30	3.48	0.00		0.00	0.00	0.00
8	0.40				2.00	2.00	3.66	6.50	3.95	0.00		0.00	0.00	0.00
9	0.30				0.10	0.00	0.00	0.30	0.00	0.00		0.00	0.00	0.00
10					0.80	0.60	0.56	0.40	1.07	0.00		0.00	0.00	0.00
11										0.00		0.00	0.00	0.00
12										0.50		0.94	0.5	0.5

BBRPSCFL.D99-D05
EFDCLLSS.D06-D10, D12
BBRSCCFL.D03
EFDCLLAS.D08

Table 15. Population assessments for largemouth bass collected from Carr Creek Lake (710 acres). Actual values are in parentheses. Scoring based on statewide assessment.

	Year										
Parameter	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Mean length age 3 at capture	4 (13.2)	4 (13.2)	4 (13.2)	4 (13.2)	4 (13.2)	4 (13.2)	4 (12.6)	4 (12.6)	4 (12.6)	4 (12.6)	4 (12.6)
Spring CPUE age 1	4 (114.40)	3 (66.20)	4 (133.70)	2 (18.84)	2 (21.10)	1 (7.61)	1 (2.43)	1 (3.14)	1 (9.95)	1 (9.00)	1 (13.91)
Spring CPUE 12.0-14.9 in	1 (12.33)	1 (11.11)	1 (8.44)	2 (24.80)	2 (27.92)	1 (18.59)	2 (24.72)	1 (17.14)	1 (10.80)	1 (5.50)	1 (9.00)
Spring CPUE ≥15.0 in	2 (7.11)	2 (10.67)	2 (9.00)	2 (14.00)	3 (29.90)	2 (15.72)	3 (23.71)	2 (16.00)	2 (12.55)	2 (16.00)	2 (13.50)
Spring CPUE ≥20.0 in	0 (0.00)	1 (0.44)	1 (0.22)	1 (0.33)	1 (0.67)	1 (0.49)	1 (0.50)	1 (0.57)	1 (0.94)	2 (1.00)	2 (1.50)
Total score	11	11	12	11	12	9	11	9	9	10	10
Assessment rating	Fair	Fair	Good	Fair	Good	Fair	Fair	Fair	Fair	Fair	Fair
Instantaneous mortality (z)		0.52	0.54	0.47	0.43	0.37	0.41	0.74	0.34	0.27	0.44
Annual mortality (A)		40.30	42.00	37.50	35.10	30.90	33.50	52.30	29.10	23.80	35.80

BBRPSCFL.D02-D05
BBRSCCFL.D03
EFDCLLSS.D06-D12
EFDCLLAS.D08

Table 16. Length frequency and electrofishing CPUE (fish/hr) of black bass collected in approximately 2.0 hours of 15-minute nocturnal electrofishing samples at Carr Creek Lake (710 acres) on 10 October 2012; numbers in parentheses are standard errors.

		Inch class																							
Area	Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	
Lower	Smallmouth bass																						0	0.00	(1.00)
	Spotted bass		26	12	1	2	4	5	5	6	2	1											64	64.00	(21.73)
	Largemouth bass		7	7	5	3	5	3	3	7	3		2	1		1	2		1	1			51	51.00	(15.09)
Upper	Smallmouth bass																						0	0.00	(0.00)
	Spotted bass		1	2		1	8	2	3	2	1	2					1						23	23.00	(7.90)
	Largemouth bass	1	1	16	9	14	2	5	9	5	2	4	3	6	2	1	2	1	1		1		85	85.00	(17.23)
Total	Smallmouth bass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	(0.00)
	Spotted bass	0	27	14	1	3	12	7	8	8	3	3	0	0	0	0	1	0	0	0	0	0	87	43.50	(13.21)
	Largemouth bass	1	8	23	14	17	7	8	12	12	5	4	5	7	2	2	4	1	2	1	1	0	136	68.00	(12.40)

EFDCLLSF.D12

Table 17. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected by electrofishing at Carr Creek Lake (710 acres). CPUE=fish/hr, SE=standard error.

	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
Year class	Mean length	SE	CPUE	SE	CPUE	SE	CPUE	SE
2003	4.4	0.1	14.00	5.40	5.78	2.30	133.77	17.49
2004	5.2	0.0	132.00	17.30	88.22	12.70	18.84	2.60
2005	4.7	0.1	15.80	6.70	5.60	1.70	21.30	6.70
2006	4.2	0.2	11.00	4.10	3.00	1.00	7.61	2.03
2007	3.7	0.5	4.98	2.24	0.99	0.65	2.43	1.16
2008	4.3	0.2	15.23	6.63	3.77	1.68	3.14	0.76
2009	3.6	0.3	12.50	2.77	3.50	1.59	9.95	2.47
2010	4.6	0.2	13.50	4.40	5.00	1.65	9.00	3.11
2011	4.6	0.1	17.60	5.66	7.20	3.03	13.19	2.56
2012	4.3	0.2	34.50	10.85	11.50	3.96		

BBRWRCFL.D03-D05
BBRSCCFL.D03
EFDCLLSF.D06-D12
EFDCLLAS.D08
EFDCLLSS.D06-D12

Table 18. Length frequency and CPUE (fish/hr) of walleye collected at Carr Creek Lake (710 acres) during daytime spring electrofishing.

	Inch class																								
Year	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	Total	CPUE	SE
2000							5	28	10	6	8	2	3	3	1		1	6	4	1			78	20.80	4.60
2001							2	4	3	14	8	6	2	2	1				2				44	20.40	4.70
2002														no sample											
2003		2	1			1	1	2			3	7		4	2		1	1	1	1	1		28	26.70	8.50
2004											1	3	13	10	13	13	4	3	1				61	27.10	7.40
2005									1	1	2	10	2	10	6	5	4	3	1	1			46	28.17	5.00
2006											1	4	6	7	9	9	8	3	4	2	2		55	31.30	5.40
2007								1		1	2	4	3	11	15	8	4	4	5	2			60	32.92	7.36
2008									1	2	5	12	16	19	21	19	15	14	7	3	1	1	136	12.76	1.15
2009								1	4	3	9	18	21	17	15	13	10	11	2				124	21.34	1.29
2010								6	8	7	7	10	15	16	14	16	13	8	8	9		1	138	12.74	3.29
2011	1	1				1			2	6	8	8	5	15	7	11	5	5	2	3	1		81	15.42	5.16
2012								1	1	2	1	13	19	22	14	4	4	4	5	1			87	20.75	2.53

EFDCLWSS.D00-D12

Table 19. Spring electrofishing catch rate (fish/hr) for each age of walleye collected from Carr Creek Lake (710 acres) from 2007-2012.

	Year								
Age	2004	2005	2006	2007	2008	2009	2010	2011	2012
1									
2	0.86	2.07	0.85	1.18	0.55	2.02	2.13	1.27	1.61
3	9.06	8.43	7.78	8.79	3.43	7.22	3.15	4.97	7.79
4	7.52	8.18	8.20	7.46	3.16	5.46	2.59	3.55	5.07
5	3.27	3.31	4.15	5.41	1.71	2.41	1.44	1.62	2.91
6	1.35	0.90	1.35	1.92	0.56	0.80	0.28	0.36	0.85
7	0.72	0.90	1.58	0.94	0.65	0.79	0.43	0.43	0.45
8	1.71	1.33	2.41	3.45	0.90	0.95	0.87	0.71	0.76
9	1.90	2.01	2.39	2.39	1.09	1.43	0.76	0.98	1.18
10	0.72	0.48	0.58	0.60	0.23	0.26	0.21	0.27	0.13

EFDCLWSS.D04-D12
EFDCLWAS.D09

Table 20. Spring electrofishing population assessments for walleye at Carr Creek Lake (710 acres). Actual values are in parentheses. Scoring based on statewide assessment.

	Year									
Parameter	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Population Density (Total CPUE)	4 (26.70)	4 (27.10)	4 (28.17)	4 (31.30)	4 (32.92)	2 (12.76)	4 (21.34)	2 (12.74)	3 (15.42)	4 (20.75)
Growth rate (Mean length age 3 at capture)	4 (20.6)	4 (20.6)	4 (20.6)	4 (20.6)	4 (20.6)	4 (20.6)	4 (19.3)	4 (19.3)	4 (19.3)	4 (19.3)
Size structure (CPUE ≥20.0 in)	4 (10.50)	4 (19.50)	4 (18.40)	4 (24.80)	4 (20.85)	4 (9.28)	4 (11.77)	4 (7.75)	4 (9.25)	4 (11.93)
Recruitment (CPUE <13.0 in)	4 (3.80)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	2 (0.50)	0 (0.00)
Total Score	16	12	12	12	12	10	12	9	13	12
Assessment Rating	Excellent	Good	Good	Good	Good	Good	Good	Good	Good	Good
Instantaneous mortality (z)	0.72	1.12	0.26	0.20	0.35	0.94	0.36	0.33	0.29	0.43
Annual mortality (A)	51.40	67.30	22.50	22.50	41.40	60.90	30.60	28.20	25.00	35.20

EFDCLWSS.D03-D12
EFDCLWAS.D03, D09

Table 21. Length frequency, CPUE (fish/hr) and SE (standard error) of crappie collected by electrofishing at Carr Creek Lake (710 acres) on 8 March 2012.

	Inch class											
Species	6	7	8	9	10	11	12	13	14	Total	CPUE	SE
White crappie	14	10	5	2	2		2	1	1	37	8.71	(3.87)
Black crappie	7	16	25	19	3	1				71	16.71	(12.85)

EFDCLCSS.D12

Table 22. Spring electrofishing CPUE (fish/hr) for each length group of black and white crappie collected at Carr Creek Lake (710 acres). SE=standard error.

	Length group															
	≥8.0 in				≥10.0 in				≥8.0 in		≥10.0 in		Total			
	WC		BC		WC		BC		all crappie		all crappie		WC		BC	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2007	10.07	9.14	3.82	3.00	6.19	5.29	0.72	0.72	13.89	12.06	6.91	5.12	27.84	26.00	6.87	5.25
2008	1.30	0.77	0.96	0.42	0.76	0.50	0.16	0.11	2.26	0.95	0.92	0.47	1.74	1.04	1.63	0.71
2009	1.32	0.57	4.58	2.24	0.81	0.35	0.57	0.44	5.91	2.75	1.37	0.64	1.59	0.51	7.51	4.78
2010	2.48	1.91	2.40	1.01	2.16	1.78	0.75	0.30	4.88	2.27	2.92	2.01	4.87	3.53	6.08	2.30
2011	1.97	1.29	1.32	0.79	0.72	0.72	0.40	0.25	3.28	1.22	1.12	0.63	21.66	14.09	3.45	0.91
2012	3.06	1.31	11.29	9.13	1.41	0.84	0.94	0.73	14.35	9.44	2.35	1.19	8.71	3.87	16.71	12.85

EFDCLCSS.D07-D12

Table 23. PSD and RSD_{10} values for black and white crappie taken in spring electrofishing samples at Carr Creek Lake (710 acres) on 8 March 2012; 95% confidence intervals are in parentheses.

Species	No. ≥5.0 in	PSD	RSD_{10}
White crappie	37	35 (20-51)	16 (4-28)
Black crappie	71	68 (57-79)	6 (0-11)

EFDCLCSS.D12

Table 24. Spring electrofishing catch rate (fish/hr) for each age of white and black crappie collected from Carr Creek Lake (710 acres).

	Year											
	2007		2008		2009		2010		2011		2012	
Age	WC	BC	WC	BC	WC	BC	WC	BC	WC	BC	WC	BC
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	1.55	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.85	0.00	0.00	0.00
3	5.40	0.00	0.12	0.00	0.05	0.00	0.93	0.00	5.07	0.00	1.86	1.28
4	4.37	0.76	0.11	0.09	0.06	0.51	0.50	0.39	4.14	0.20	1.53	3.22
5	6.69	3.07	0.70	0.68	0.54	3.09	2.08	1.84	4.17	0.88	1.88	2.50
6	7.51	2.31	0.66	0.39	0.47	2.44	1.00	0.98	4.57	0.64	1.85	5.66
7	1.55		0.11	0.00	0.26	0.00	0.28	0.00	0.18		0.52	2.91
8	0.78			0.06	0.21	0.34	0.08	0.64	0.18		0.60	0.00
9											0.35	0.34
10											0.00	0.00
11											0.00	0.00
12											0.00	0.79
13											0.12	0.00

EFDCLWSS.D07-D12
EFDCLCAS.D07, D12
WC=white crappie
BC=black crappie

Table 25. Length frequency and CPUE (fish/hr) of black bass collected in 1.25 hours of 15-min electrofishing runs at Cranks Creek Lake (219 acres) on 11 April 2012; numbers in parentheses are standard errors.

	Inch class																				
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
LMB	3	23	8	2	7	21	7	9	4	3	3	1	2	1	1	2	2		3	102	81.60 (14.46)
SB	2	1	2				1	3	2											11	8.80 (0.80)

LMB = largemouth bass
SB = spotted bass
EFDCCLSS.D12

Table 26. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Cranks Creek Lake (219 acres). SE=standard error.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2000	51.33	11.05	24.67	3.78	2.67	1.33	2.00	1.37	2.00	1.37	80.67	12.45
2001	20.00	6.37	22.00	8.31	2.67	1.33	2.00	0.89	0.67	0.67	46.67	13.84
2002						no sample						
2003						no sample						
2004	40.67	7.55	40.00	5.75	3.33	1.91	4.00	2.07	0.67	0.67	88.00	11.12
2005	59.20	16.56	70.40	10.48	4.00	1.26	6.40	2.04	2.40	0.98	140.00	17.34
2006						no sample						
2007						no sample						
2008	33.00	7.90	51.00	6.61	27.00	4.43	8.00	3.65	3.00	1.91	119.00	8.23
2009						no sample						
2010	80.80	27.64	43.20	10.38	9.60	2.99	14.40	2.04	4.80	2.33	148.00	41.18
2011	57.60	6.01	52.00	10.51	9.60	1.60	11.20	3.88	5.60	3.49	130.40	15.42
2012	34.40	12.04	32.80	4.63	5.60	2.40	8.80	2.33	2.40	0.98	81.60	14.46

EFDCCLSS.D00-D12

Table 27. PSD and RSD values for each species of black bass in each area of Cranks Creek Lake (219 acres) on 11 April 2012. Number of fish (No.) is the number of stock-size or larger fish collected and numbers in parentheses are 95% confidence intervals.

	Largemouth bass			Spotted bass		
Area	No.	PSD	RSD_{15}	No.	PSD	RSD_{14}
Total	59	31 (19-42)	19 (9-29)	6	33 (0-75)	0

EFDCCLSS.D12

Table 28. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Cranks Creek Lake (219 acres) from 2008-2012.

	Year				
Age	2008	2009	2010	2011	2012
1	23.00	No	68.80	45.60	28.00
2	41.75	Sample	35.80	45.60	30.60
3	14.58		14.87	14.66	7.53
4	26.11		9.16	11.47	5.51
5	6.56		4.18	2.93	1.96
6	1.00		2.40		0.80
7	1.00		0.40		0.80
8	1.00		0.80	0.80	0.80
9	3.00		2.00	0.80	0.80

EFDCCLSS.D08-D12
EFDCCLAS.D08

Table 29. Population assessments for largemouth bass collected from Cranks Creek Lake (219 acres). Actual values are in parentheses. Scoring based on statewide assessment.

	Year				
Parameter	2005	2008	2010	2011	2012
Mean length age 3 at capture	3 (11.2)	3 (11.2)	3 (11.2)	3 (11.2)	3 (11.2)
Spring CPUE age 1	3 (50.40)	2 (23.00)	3 (68.80)	2 (45.60)	2 (28.00)
Spring CPUE 12.0-14.9 in	1 (4.00)	2 (27.00)	1 (9.60)	1 (9.60)	1 (5.60)
Spring CPUE ≥15.0 in	2 (6.40)	2 (8.00)	2 (14.40)	2 (11.20)	2 (8.80)
Spring CPUE ≥20.0 in	3 (2.40)	3 (3.00)	4 (4.80)	4 (5.60)	3 (2.40)
Total score	12	12	13	12	11
Assessment rating	Good	Good	Good	Good	Fair
Instantaneous mortality (z)	0.48	0.52	0.49	0.56	0.53
Annual mortality (A)	38.40	40.60	38.90	43.10	40.90

EFDCCLAS.D08
EFDCCLSS.D05, D08, D10-D12

Table 30. Length frequency and CPUE (fish/hr) of black bass collected in 1.25 hours of 15-min nocturnal electrofishing runs at Cranks Creek Lake (219 acres) on 4 October 2012; numbers in parentheses are standard errors.

	Inch class																						
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	
SB	3	3	1		1	5	3	3	4	1	1	1									26	20.80	(8.24)
LMB	2	38	30	10	4	23	13	12	7	4	2	1	1					2		1	150	120.00	(36.75)

LMB = largemouth bass
SB = spotted bass
EFDCCLSF.D12

Table 31. Indices of year class strength at age-0 and age-1 and mean lengths (in) of age-0 largemouth bass at Cranks Creek Lake (219 acres) from electrofishing. CPUE=fish/hr, SE=standard error.

	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
Year class	Mean length	SE	CPUE	SE	CPUE	SE	CPUE	SE
1999							44.33	10.37
2000							14.33	4.83
2001	5.0	0.1	27.33	5.21	13.33	3.04		
2002	5.1	0.1	34.40	10.63	20.80	7.74		
2003							15.00	4.25
2004							50.40	15.26
2005								
2006								
2007	4.3	0.1	32.00	8.67	7.20	2.94	23.00	7.33
2008								
2009	3.9	0.1	64.00	29.75	7.20	4.80	68.80	26.08
2010	4.3	0.1	93.33	28.50	16.00	6.11	45.60	5.95
2011	5.3	0.1	51.20	5.43	34.40	5.31	28.00	10.68
2012	4.1	0.1	66.40	27.38	10.40	5.31		

EFDCCLSF.D01-D02, D07, D09-D12
EFDCCLAS.D08
EFDCCLSS.D00, D01, D04, D05, D08, D10-D12

Table 32. Species composition, relative abundance and CPUE (fish/hr) of black bass collected in approximately 2.5 hours of 15-minute nocturnal electrofishing samples by area at Dewey Lake (1,100 acres) on 17 April 2012. Standard errors are in parentheses.

		Inch class																				
Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Lower	Spotted bass	1	3	1	6	8	6	5	3	2											35	26.61 (7.24)
	Largemouth bass	2	16	15	3	3	2	22	23	24	33	13	3	3	2	6	3	2			175	133.35 (6.52)
Upper	Spotted Bass					1		1													2	1.60 (1.60)
	Largemouth bass		6	8	8	8	13	17	21	41	29	8	3	4	1	2	2	1		1	173	138.40 (17.00)
Total	Spotted bass	1	3	1	6	9	6	6	3	2											37	14.10 (5.44)
	Largemouth bass	2	22	23	11	11	15	39	44	65	62	21	6	7	3	8	5	3		1	348	136.03 (8.62)

EFDDLLSS.D12

Table 33. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Dewey Lake (1,100 acres). SE=standard error.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
1987	44.60		38.30		12.00		0.60		0.00		95.40	
1988	84.00		40.70		26.70		2.00		0.00		154.70	
1989	75.00		27.50		10.80		7.00		0.00		120.70	
1990	58.80		68.00		32.00		11.40		0.57		171.40	
1991	73.80		50.60		18.40		3.50		0.18		146.40	
1992	57.40		64.10		17.20		7.40		0.22		146.10	
1993	43.70		71.80		15.60		8.80		0.80		140.00	
1994						no sample						
1995	46.60		59.60		28.50		3.60		0.00		138.30	16.90
1996						no sample						
1997	15.30		53.30		32.30		11.00		1.00		112.00	12.20
1998	20.10		51.40		43.20		7.20		0.60		122.00	8.50
1999	78.90		34.60		39.50		12.80		0.50		165.80	12.70
2000	62.20	4.70	44.00	4.40	23.60	3.50	10.30	1.30	0.10		140.10	9.50
2001	150.10	17.20	57.80	5.70	26.90	2.70	17.80	1.60	0.60		252.60	22.80
2002						no sample						
2003	71.11	10.05	55.56	4.40	23.11	1.77	22.00	2.12	0.70		171.80	14.60
2004	96.20	11.90	34.70	3.80	20.00	3.20	17.50	2.60	1.00		168.30	13.90
2005	39.30	5.00	59.20	6.30	31.00	3.20	24.50	1.90	0.30		153.90	12.80
2006	32.30	5.70	66.40	8.60	24.20	3.60	24.90	3.60	0.70		147.80	10.00
2007	54.86	9.63	80.77	9.79	35.09	4.97	30.18	4.07	1.48	0.72	200.91	19.94
2008	87.37	10.41	86.46	9.50	21.56	3.60	16.34	3.44	0.80	0.53	211.73	12.35
2009	83.68	12.69	62.82	6.33	18.83	1.91	14.42	3.39	0.50	0.50	179.75	16.92
2010	42.58	5.91	97.99	27.59	12.30	2.75	8.28	2.03	0.00	0.00	161.16	33.02
2011						no sample						
2012	27.21	4.57	63.19	7.02	34.90	3.85	10.72	2.49	0.40	0.40	136.03	8.62

EFDDLLSS.D87-D02, D06-D10, D12
BBRPSDEW.D03-D05

Table 34. PSD and RSD values for each species of black bass in each area of Dewey Lake (1,100 acres) during spring 2012. Numbers in parentheses are 95% confidence intervals.

	Largemouth bass			Spotted bass		
Area	No.	PSD	RSD_{15}	No.	PSD	RSD_{14}
Lower	136	48 (39-56)	12 (6-17)	24	8.0 (0-20)	0
Upper	143	36 (28-44)	8 (3-12)	2	0	0
Total	279	42 (36-47)	10 (6-13)	26	8 (0-18)	0

EFDDLLSS.D12

Table 35. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Dewey Lake (1,100 acres) from 2000-2012.

	Year										
Age	2000	2001	2003	2004	2005	2006	2007	2008	2009	2010	2012
1	55.30	125.70	61.20	79.69	24.76	27.90	48.98	49.46	55.59	16.36	19.52
2	35.60	47.10	36.60	30.14	37.57	30.20	41.33	98.64	70.75	91.97	25.34
3	11.30	34.90	17.20	12.75	20.87	21.10	27.13	31.29	25.67	34.29	56.84
4	18.80	14.30	22.10	17.83	28.16	28.40	37.19	13.68	10.68	9.41	18.01
5	9.70	16.70	11.40	9.43	15.48	13.20	14.59	8.26	6.64	3.77	9.44
6	3.70	6.50	2.10	1.91	3.10	1.70	3.15	6.95	6.17	3.78	4.22
7	3.30	2.30	7.40	5.59	7.61	8.90	9.16	0.53	1.16	0.26	0.67
8	0.40	1.80	4.40	3.21	4.76	5.70	5.00	1.33	0.83	0.53	0.39
9	1.70	1.80	8.40	6.51	10.73	9.60	12.41	1.20	2.00	0.80	1.20
10	0.40	1.00	0.33	1.00	0.39	0.30	1.48	0.00	0.00		
11			0.30	0.00	0.00	0.00	0.00	0.40	0.25		
12			0.30	0.00	0.00	0.00	0.00				
13				0.26	0.44	0.40	0.50				
14						0.30	0.30				

EFDDLLSS.D06-D10, D12
BBRPSDEW.D00-D05
BBRSCDEW.D03
EFDDLLAS.D08

Table 36. Population assessments for largemouth bass collected from Dewey Lake (1,100 acres). Actual values are in parentheses. Scoring based on statewide assessment.

Parameter	Year								
	2003	2004	2005	2006	2007	2008	2009	2010	2012
Mean length age 3 at capture	1 (10.5)	1 (10.5)	1 (10.5)	1 (10.5)	1 (10.5)	2 (11.3)	2 (11.3)	2 (11.3)	2 (11.3)
Spring CPUE age 1	4 (61.20)	4 (79.70)	2 (24.80)	2 (27.90)	3 (48.98)	4 (49.46)	4 (55.59)	1 (16.36)	1 (19.52)
Spring CPUE 12.0-14.9 in	2 (23.10)	2 (20.00)	3 (31.00)	2 (24.20)	4 (35.09)	2 (21.56)	2 (18.80)	1 (12.30)	3 (34.90)
Spring CPUE ≥15.0 in	4 (22.00)	3 (17.50)	4 (24.50)	4 (24.90)	4 (30.18)	3 (16.34)	3 (14.40)	2 (8.28)	2 (10.72)
Spring CPUE ≥20.0 in	2 (0.70)	2 (1.00)	2 (0.30)	2 (0.70)	2 (1.48)	2 (0.80)	2 (0.50)	0 (0.00)	2 (0.40)
Total score	13	12	12	11	14	13	13	6	10
Assessment rating	Good	Good	Good	Fair	Good	Good	Good	Poor	Fair
Instantaneous mortality (z)	0.41	0.40	0.42	0.41	0.39	0.56	0.48	0.77	0.64
Annual mortality (A)	33.60	32.60	34.30	33.50	32.10	42.80	38.40	53.90	35.80

BBRPSDEW.D03-D05
EFDDLLSS.D06-D10, D12
BBRSCDEW.D03
EFDDLLAS.D08

Table 37. Length-frequency distribution of each black bass species captured during 2.5 hours of 15-minute nocturnal electrofishing runs at Dewey Lake (1,100 acres) on 11 September 2012. Standard errors are in parentheses.

		Inch class																				Total	CPUE	
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			
Lower	Spotted bass	2	5			1	3	1	4	3	1											20	16.00	(6.69)
	Largemouth bass	7	16	18	4	2	2	15	11	10	8	8	5	4								110	88.00	(18.24)
Upper	Spotted Bass																					0	0.00	(0.00)
	Largemouth bass		2	4	6	6	8	24	9	20	20	15	4	5	2	4	2		2			133	106.40	(19.21)
Total	Spotted bass	2	5	0	0	1	3	1	4	3	1	0	0	0	0	0	0	0	0	0	0	20	8.00	(4.13)
	Largemouth bass	7	18	22	10	8	10	39	20	30	28	23	9	9	2	4	2	0	2	0	0	243	97.20	(12.86)

EFDDLLSF.D12

Table 38. Indices of year class strength at age-0 and age-1 and mean lengths (in) of age-0 largemouth bass at Dewey Lake (1,100 acres) from electrofishing. CPUE=fish/hr, SE=standard error.

	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
Year class	Mean length	SE	CPUE	SE	CPUE	SE	CPUE	SE
2002	5.0	0.0	75.58	14.20	37.56	9.36	61.23	9.44
2003	4.9	0.1	38.89	10.64	15.11	3.79	79.69	10.46
2004	5.2	0.1	45.20	7.11	25.40	4.60	24.76	4.12
2005	4.4	0.1	58.67	16.12	16.89	6.60	27.90	5.49
2006	5.1	0.1	38.97	9.89	21.32	5.82	48.98	9.18
2007	4.8	0.1	54.28	12.82	21.15	4.23	49.46	10.04
2008	5.0	0.1	54.93	14.31	30.03	7.36	55.59	12.08
2009	5.3	0.1	45.68	8.81	28.78	5.17	16.36	3.31
2010	5.0	0.1	67.60	14.18	38.40	8.50	no sample	
2011	4.6	0.1	37.20	9.26	14.80	3.58	19.52	4.43
2012	4.4	0.1	26.00	5.31	7.20	1.67		

BBRPSDEW.D03-D05
BBRDLLSF.D02
BBRWRDEW.D03-D04
BBRSCDEW.D03
EFDDLLSF.D05-D12
EFDDLLSS.D06-D10, D12
EFDDLLAS.D08

Table 39. Length frequency and CPUE (fish/nn) for white crappie collected at Dewey Lake (1,100 acres) in 20 net-nights from 13 - 15 November 2012. Standard errors are in parentheses.

	Inch class														
Species	2	3	4	5	6	7	8	9	10	11	12	13	Total	CPUE	SE
WC		16	85	50	169	98	68	43	60	19	9	3	620	31.00	(6.77)
BC	3	3	1	12	114	76	107	9					325	16.25	(4.66)

WC=white crappie
BC=black crappie
EFDDLCTF.D12

Table 40. PSD and RSD_{10} values calculated for crappie collected in trap nets at Dewey Lake (1,100 acres) during November 2012; 95% confidence intervals are in parentheses.

Species	No. fish ≥ 5.0 in	PSD	RSD_{10}
WC	519	39 (35-43)	18.00 (14-21)
BC	318	37 (31-42)	

WC = white crappie
BC = black crappie
EFDDLCTF.D12

Table 41. Mean back-calculated length (in) at each annulus for white crappie collected from Dewey Lake (1,100 acres) in November 2012, including 95% confidence intervals.

Year class	No.	Age 1	2	3	4	5	6	7	8	9
2011	45	4.3								
2010	52	5.1	7.8							
2009	11	5.0	7.9	10.0						
2008	2	4.8	7.1	10.1	11.6					
2007	5	4.5	6.6	7.9	9.4	10.5				
2006	4	4.8	6.6	7.8	9.0	10.7	11.9			
2005	2	4.2	5.4	6.5	7.1	8.0	9.4	11.0		
2004	0									
2003	1	4.0	5.4	6.5	7.1	7.9	9.1	10.3	11.1	12.1
Mean		4.8	7.6	8.8	9.1	9.9	10.8	10.8	11.1	12.1
Smallest		3.5	5.4	6.4	7.1	7.7	8.7	10.3	11.1	12.1
Largest		6.6	9.6	11.9	12.2	12.1	12.7	11.3	11.1	12.1
STD error		0.1	0.1	0.3	0.4	0.4	0.6	0.3		
95% CI LO		4.6	7.4	8.2	8.3	9.1	9.7	10.2		
95% CI HI		4.9	7.8	9.4	10.0	10.7	11.9	11.4		

Intercept = 0
EFDDLCAF.D12

Table 42. Mean back-calculated length (in) at each annulus for black crappie collected from Dewey Lake (1,100 acres) in November 2012, including 95% confidence intervals.

Year class	No.	Age 1	2	3	4	5	6	7	8	9
2011	5	3.5								
2010	23	3.6	5.7							
2009	4	3.6	6.0	7.5						
2008	10	3.6	5.4	6.7	7.7					
2007	10	3.4	5.2	6.6	7.5	8.3				
2006	7	3.4	4.8	5.9	6.6	7.5	8.0			
2005	1	3.1	4.6	5.4	5.9	6.5	7.1	8.0		
2004										
2003	1	3.2	4.4	5.1	5.7	6.2	7.0	7.4	7.9	8.3
Mean		3.5	5.4	6.5	7.2	7.8	7.8	7.7	7.9	8.3
Smallest		2.5	3.1	4.4	5.4	6.2	7.0	7.4	7.9	8.3
Largest		4.0	6.5	7.8	9.1	8.9	8.8	8.0	7.9	8.3
STD error		0.0	0.1	0.1	0.2	0.2	0.2	0.3		
95% CI LO		3.4	5.3	6.2	6.9	7.4	7.3	7.1		
95% CI HI		3.6	5.6	6.7	7.5	8.2	8.2	8.3		

Intercept = 0
EFDDLCAF.D12

Table 43. Age frequency and CPUE (fish/nn) of white crappie collected by trap netting for 20 net-nights at Dewey Lake (1,100 acres) in November 2012; numbers in parentheses are standard errors.

Age	Inch class 3	4	5	6	7	8	9	10	11	12	13	Total	Age%	CPUE	
0	16	85										101	16	5.05	(1.50)
1			50	169	85							304	49	15.20	(3.71)
2					13	68	38	53	10			182	29	9.03	(1.87)
3							5		7	2		14	2	0.75	(0.22)
4										2		2	0	0.11	(0.04)
5								8	2		1	11	2	0.52	(0.12)
6										1	2	3	1	0.17	(0.10)
7										2		2	0	0.11	(0.04)
8												0	0	0.00	
9										1		1	0	0.06	(0.02)
Total	16	85	50	169	98	68	43	61	19	8	3	620			
%	3	14	8	27	16	11	7	10	3	1					

CPUE of ≥8.0 in (quality size) = 10.10 fish/nn
CPUE of ≥10.0 in (preferred size) = 4.55 fish/nn
EFDDLCAF.D12
EFDDLCTF.D12

Table 44. Age frequency and CPUE (fish/nn) of black crappie collected by trap netting for 20 net-nights at Dewey Lake (1,100 acres) in November 2012; numbers in parentheses are standard errors.

	Inch class											
Age	2	3	4	5	6	7	8	9	Total	Age%	CPUE	
0	3	3							6	2	0.30	(0.11)
1			1	12					13	4	0.65	(0.33)
2					114	40			154	47	7.70	(2.64)
3						8	14		22	7	1.11	(0.31)
4						20	29	1	50	15	2.48	(0.69)
5						4	21	6	31	10	1.57	(0.43)
6						4	29	2	35	11	1.73	(0.48)
7							7		7	2	0.36	(0.10)
8									0	0	0.00	
9							7		7	2	0.36	(0.10)
Total	3	3	1	12	114	76	107	9	325			
%	1	1	0	4	35	23	33	3				

CPUE of ≥8.0 in (quality size) =5.80 fish/nn
CPUE of ≥10.0 in (preferred size) = 0.00 fish/nn
EFDBLCAF.D12
EFDBLCTF.D12

Table 45. Population assessment scores for white crappie collected from Dewey Lake (1,100 acres). Actual assessment values are in parentheses. Scoring based on statewide assessment.

Parameter	Year			
	2002	2008	2010	2012
CPUE (excluding age 0)	4 (48.20)	4 (43.95)	3 (15.63)	4 (25.95)
CPUE age 1	4 (14.40)	2 (6.62)	3 (7.78)	4 (15.20)
CPUE age 0	4 (27.50)	1 (2.63)	2 (4.82)	2 (5.05)
CPUE ≥ 8.0 in	2 (4.80)	4 (15.47)	3 (8.73)	3 (10.10)
Mean length age 2 at capture	1 (6.3)	1 (7.0)	3 (9.1)	4 (9.6)
Instantaneous mortality (z)	1.27	0.49	0.50	0.65
Annual Mortality (A)	72.00	38.80	39.50	47.60
Total score	15	12	14	17
Assessment rating	Good	Fair	Good	Good

EFDDLCTF.D02, D08, D10, D12
EFDDLCAF.D02, D08, D10, D12

Table 46. Population assessment scores for black crappie collected from Dewey Lake (1,100 acres). Actual assessment values are in parentheses. Scoring based on statewide assessment.

Parameter	Year			
	2002	2008	2010	2012
CPUE (excluding age 0)	2 (6.10)	3 (17.35)	1 (2.00)	3 (15.95)
CPUE age 1	1 (1.30)	1 (2.92)	1 (0.11)	1 (0.65)
CPUE age 0	1 (1.60)	1 (2.39)	1 (1.00)	1 (0.30)
CPUE ≥ 8.0 in	1 (0.10)	1 (1.84)	1 (0.73)	3 (5.80)
Mean length age 2 at capture	1 (5.0)	1 (6.5)	1 (6.7)	1 (6.8)
Instantaneous mortality (z)	1.25	0.35	0.06	0.33
Annual Mortality (A)	71.40	29.60	6.20	28.10
Total score	6	7	5	9
Assessment rating	Poor	Poor	Poor	Fair

EFDDLCTF.D02, D08, D10, D12
EFDDLCAF.D02, D08, D10, D12

Table 47. Length frequency and CPUE (fish/hr) of black bass collected in approximately 2.5 hours of 15-minute nocturnal electrofishing samples on Fishtrap Lake (1,143 acres) 15 May 2012; numbers in parentheses are standard errors.

Area/	Inch class																					
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	
Lower																						
LMB	2	1	5	9	4		3	2	4	2	2	2	1	1	1		1	1		41	82.00	(2.00)
SMB																		1		1	2.00	(2.00)
SB						1	4													5	10.00	(2.00)
Upper																						
LMB	2	12	23	13	11	6	7	7	2	4	4	4	2	5	2	1		3	1	109	109.00	(11.70)
SMB									1											1	1.00	(1.00)
SB																						
Total																						
LMB	4	13	28	22	15	6	10	9	6	6	6	6	3	6	3	1	1	4	1	150	100.00	(9.35)
SMB																		1		1	0.67	(0.67)
SB						1	4		1											6	4.00	(2.07)

LMB = largemouth bass
SB = spotted bass
SMB = smallmouth bass
EFDFLLSS.D12

Table 48. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass at Fishtrap Lake (1,143 acres).

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
2000	28.70	4.20	29.00	2.30	19.00	2.60	23.00	4.30	3.40		99.70	9.90
2001	20.30	3.70	32.70	4.30	17.30	2.50	10.30	2.90	1.30		80.70	7.70
2002	no data											
2003	43.00	4.40	25.00	7.60	16.00	4.90	11.00	3.40	2.00		95.00	4.10
2004	44.70	6.80	45.10	5.80	19.30	2.20	13.10	3.90	1.50		122.20	10.70
2005	61.80	10.20	67.60	10.00	38.90	6.50	14.90	2.00	0.00		183.30	20.80
2006	52.50	8.80	37.60	1.90	33.00	3.40	4.00	0.70	0.00		127.10	11.60
2007	28.69	4.73	53.93	8.34	33.00	3.47	7.91	1.85	1.19	0.85	123.52	13.48
2008	39.49	12.67	31.06	3.49	31.99	5.81	9.37	2.66	0.00		111.91	14.98
2009	44.17	10.71	61.44	11.75	20.42	4.78	9.85	2.44	0.64	0.64	135.88	15.05
2010	52.40	3.07	35.60	5.58	20.40	2.83	10.40	2.54	0.40	0.40	118.80	11.27
2011						no sample						
2012	54.67	8.98	20.67	1.91	12.00	2.31	12.67	4.31	3.33	2.62	100.00	9.35

EFDFLLSS.D00-D10, D12

Table 49. PSD and RSD_{15} values for largemouth bass in each area of Fishtrap Lake (1,143 acres) during spring 2012. Numbers in parentheses are 95% confidence intervals.

	Largemouth bass		
Area	No.	PSD	RSD_{15}
Lower	20	55 (33-77)	25 (6-44)
Upper	48	54 (40-68)	29 (16-42)
Total	68	54 (42-66)	28 (17-39)

EFDFLLSS.D12

Table 50. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Fishtrap Lake (1,143 acres) from 2003-2012.

	Year								
Age	2003	2004	2005	2006	2007	2008	2009	2010	2012
1	42.00	44.73	61.45	52.49	28.29	38.51	44.17	51.55	50.75
2	26.79	46.82	73.41	43.50	57.76	34.78	64.39	24.07	16.03
3	9.61	13.30	26.53	22.99	22.68	21.33	14.08	15.97	7.67
4	7.20	7.30	9.80	5.21	8.79	9.12	6.42	12.73	7.45
5	2.50	2.53	4.93	1.13	2.05	2.10	3.15	7.75	8.36
6	0.50	1.45	1.09	0.16	0.39	0.99	0.33	5.52	3.07
7	4.40	4.96	5.69	1.60	2.57	4.11	3.02	0.40	0.33
8	1.00	1.09			0.60		0.32	0.80	3.00

EFDFLLSS.D03-D10, D12
EFDFLLAS.D04, D10

Table 51. Population assessment for largemouth bass collected from Fishtrap Lake (1,143 acres). Actual values are in parentheses. Scoring based on statewide assessment.

	Year								
Parameter	2003	2004	2005	2006	2007	2008	2009	2010	2012
Mean length age 3 at capture	4 (13.6)	4 (13.6)	4 (13.6)	4 (13.6)	4 (13.6)	4 (13.6)	4 (13.6)	3 (11.7)	3 (11.7)
Spring CPUE age 1	3 (42.00)	2 (35.40)	4 (61.50)	4 (52.50)	2 (28.29)	3 (38.51)	3 (44.17)	4 (51.55)	4 (50.75)
Spring CPUE 12.0-14.9 in	2 (16.00)	2 (19.30)	4 (38.90)	3 (33.00)	3 (33.00)	3 (31.99)	2 (20.42)	2 (20.40)	1 (12.00)
Spring CPUE ≥15.0 in	2 (11.00)	3 (13.10)	3 (14.90)	1 (4.00)	2 (7.91)	2 (9.37)	2 (9.85)	2 (10.40)	3 (12.67)
Spring CPUE ≥20.0 in	3 (2.00)	2 (1.50)	0 (0.00)	0 (0.00)	2 (1.19)	0 (0.00)	2 (0.64)	2 (0.40)	4 (3.33)
Total score	14	13	15	12	13	12	13	13	15
Assessment rating	Good	Good	Good	Good	Good	Good	Good	Good	Good
Instantaneous mortality (z)	0.52	0.56	0.65	0.83	0.72	0.59	0.67	0.66	0.5
Annual mortality (A)	40.40	42.70	48.00	56.50	51.30	44.30	49.10	48.20	39.20

EFDFLLSS.D03-D10, D12
EFDFLLAS.D04, D10

Table 52. Length frequency and CPUE (fish/hr) of black bass collected in approximately 1.5 hours of 15-minute nocturnal electrofishing samples at Fishtrap Lake (1,143 acres) on 17 September 2012; numbers in parentheses are standard errors.

	Inch class																				
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
SMB		1										1		1						3	2.00 (1.37)
SB		2			1			1	2											6	4.00 (1.79)
LMB	6	46	41	16	7	11	26	15	23	5		2	5	1		2			1	207	138.00 (34.99)

LMB = largemouth bass
SMB = smallmouth bass
SB= spotted bass
EFDFLLSF.D12

Table 53. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected at Fishtrap Lake (1,143 acres).

	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
Year class	Mean length	SE	CPUE	SE	CPUE	SE	CPUE	SE
2003	5.1	0.04	106.20	32.90	59.60	15.90	35.35	6.00
2004	5.0	0.03	256.00	51.10	122.67	23.90	61.50	10.15
2005	4.5	0.05	108.00	41.30	24.00	11.10	52.49	8.75
2006	5.0	0.05	72.70	14.10	36.50	8.00	28.29	4.49
2007	5.1	0.05	114.20	23.70	63.50	11.03	38.51	12.06
2008	4.6	0.06	75.30	25.85	26.34	9.49	44.17	10.71
2009	4.8	0.08	83.33	15.09	39.33	5.41	51.55	3.17
2010	5.2	0.06	111.60	16.44	61.60	8.35	no sample	
2011	5.1	0.06	119.43	26.94	69.14	13.32	50.75	8.17
2012	5.1	0.06	72.67	24.25	38.00	12.03		

EFDFLLSF.D03-D12
EFDFLLSS.D04-D10, D12
EFDFLLAS.D04, D10

Table 54. Length frequency and CPUE (fish/hr) of black bass collected in approximately 0.375 hours of 7.5-minute electrofishing samples on Highsplint Lake (7 acres) 4 April 2012; numbers in parentheses are standard errors.

	Inch class															
Species	5	6	7	8	9	10	11	12	13	14	15	16	17	Total	CPUE	
LMB	15	30	23	16	25	29	24	9	2	1			1	175	466.67	(16.22)
SMB										1				1	2.67	(2.67)

LMB = largemouth bass
SMB = smallmouth bass
EFDHSLSS.D12

Table 55. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass at Highsplint Lake (7 acres).

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
2012	181.33	16.22	250.67	25.44	32.00	0.00	2.67	2.67	0.00	0.00	466.67	16.22

EFDHSLSS.D12

Table 56. PSD and RSD_{15} values for largemouth bass in each area of Highsplint Lake (7 acres) during spring 2012. Numbers in parentheses are 95% confidence intervals.

	Largemouth bass		
Area	No.	PSD	RSD_{15}
Total	107	12	1
		(6-18)	(0-3)

EFDHSLSS.D12

Table 57. Length frequency and CPUE (fish/hr) of black bass and collected in 1.25 hours of 15-min electrofishing runs in Martins Fork Lake (330 acres) on 10 May 2012; numbers in parentheses are standard errors.

	Inch class																				
Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE
LMB	6	8	5	2	13		2		4	1	2	4	4	1	1	2			1	56	44.80 (8.33)
SB	5	2		4		2	1		1											15	12.00 (3.58)

LMB =largemouth bass
SB = spotted bass
EFDMLLSS.D12

Table 58. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Martins Fork Lake (330 acres). S.E. = standard error.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2003	14.00	3.70	22.00	3.80	3.30	1.20	5.30	2.00	0.00		68.00	15.70
2004	2.67	2.70	89.33	19.20	4.00	2.30	5.33	3.50	0.00		101.30	26.80
2005	4.80	2.30	23.20	6.00	17.60	4.80	4.80	2.00	0.00		50.40	10.80
2006	9.30	1.97	19.89	6.03	13.26	2.99	9.30	2.66	0.70		51.74	10.70
2007	7.86	3.30	48.64	13.30	15.65	2.58	21.13	5.27	1.57	0.96	93.27	19.34
2008	7.80	4.80	19.46	7.18	20.21	3.74	19.41	2.41	0.77	0.77	66.88	12.21
2009	11.15	4.06	19.92	3.32	9.57	2.04	11.16	1.48	1.59	0.97	51.81	7.43
2010	17.60	6.27	26.40	16.42	8.00	2.83	19.20	2.65	0.80	0.80	71.20	22.78
2011	23.20	5.57	34.40	9.68	16.80	3.88	16.00	3.35	0.80	0.80	90.40	12.75
2012	16.80	4.63	12.00	3.79	5.60	2.40	10.40	4.31	0.80	0.80	44.80	8.33

EFDMLLSS.D03-D12

Table 59. PSD and RSD values obtained for each black bass species taken in spring nocturnal electrofishing samples in Martins Fork Lake (330 acres) in May 2012; 95% confidence intervals are in parentheses; largemouth bass stock size >8.0 in and spotted bass stock size >7.0 in.

Largemouth bass			Spotted bass		
No.	PSD	RSD_{15}	No.	PSD	RSD_{14}
35	57	37	8	13	0
	(41-74)	(21-53)		(0-37)	

EFDMLLSS.D12

Table 60. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Martins Fork Lake (330 acres) from 2003-2012.

	Year									
Age	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
1	15.31	10.86	5.37	9.98	10.12	9.98	7.17	4.80	11.20	8.80
2	19.35	78.25	20.76	17.66	41.28	17.80	15.14	16.80	21.60	12.00
3	3.33	6.89	15.47	9.49	8.22	13.50	12.39	16.96	27.20	4.48
4	2.67	1.33	2.40	6.64	15.65	10.06	10.74	9.44	11.20	5.92
5	0.67			1.33	2.36	3.90	0.53	1.33	2.13	0.27
6							2.12	2.13	2.93	0.27
7							1.32	5.33	3.73	1.87

EFDMLLSS.D03-D12
EFDMLLAS.D03, D09

Table 61. Spring electrofishing population assessments for largemouth bass collected from Martins Fork Lake (330 acres). Actual values are in parentheses. Scoring based on statewide assessment.

Parameter	Year									
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Mean length age-3 at capture	4 (14.3)	4 (14.3)	4 (14.3)	4 (14.3)	4 (14.3)	4 (14.3)	4 (11.8)	4 (11.8)	4 (11.8)	4 (11.8)
Spring CPUE age 1	1 (15.31)	1 (10.86)	1 (5.37)	1 (9.98)	1 (10.12)	1 (9.98)	1 (7.17)	1 (4.80)	1 (11.20)	1 (8.80)
Spring CPUE 12.0-14.9 in	1 (3.30)	1 (4.00)	1 (17.60)	1 (13.30)	1 (15.65)	2 (20.21)	1 (9.57)	1 (8.00)	1 (16.80)	1 (5.60)
Spring CPUE ≥15.0 in	2 (5.30)	2 (5.30)	2 (4.80)	2 (9.30)	3 (21.13)	3 (19.41)	2 (11.16)	3 (19.20)	2 (16.00)	2 (10.40)
Spring CPUE >20.0 in	0 (0.00)	0 (0.00)	0 (0.00)	1 (0.70)	2 (1.57)	1 (0.77)	2 (1.59)	1 (0.80)	1 (0.80)	1 (0.80)
Total score	8	8	8	9	11	11	10	10	9	9
Assessment rating	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair
Instantaneous mortality (z)	1.03	2.04	1.08	0.81	0.80	0.48	0.54	0.37	0.33	0.54
Annual mortality (A)	64.40	87.00	66.00	55.70	55.10	38.40	41.60	31.30	28.40	41.60

EFDMLLSS.D03-D12
EFDMLLAS.D03, D09

Table 62. Length frequency and CPUE (fish/hr) of black bass collected at Martins Fork Lake (330 acres) during 1.25 hours of 15 minute nocturnal electrofishing samples on 12 September 2012; numbers in parentheses are standard errors.

	Inch class																		
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total	CPUE	
Coosa		1		1	2												4	3.20	(1.50)
SMB					1												1	0.80	(0.80)
SB	1	3	2	4	6	2	1					1					20	16.00	(2.19)
LMB	6	13	13	5	13	25	14	8	3	1	2	2		1		1	107	85.60	(11.91)

LMB = largemouth bass
SB = spotted bass
SMB = smallmouth bass
EFDMLLSF.D12

Table 63. Electrofishing indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected during 2002 - 2012 at Martins Fork Lake (330 acres); CPUE = fish/hr, SE = standard error.

	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
Year class	Mean length	SE	CPUE	SE	CPUE	SE	CPUE	SE
2002	5.5	0.1	34.40	8.60	25.60	7.90	15.30	3.60
2003	no fall sample						77.50	18.50
2004	no fall sample						24.60	5.90
2005	4.4	0.2	32.00	4.30	10.00	2.60	9.98	2.30
2006	4.5	0.1	38.40	14.50	11.20	3.20	10.12	3.36
2007	4.6	0.2	28.68	8.65	10.36	2.99	9.98	5.09
2008	4.4	0.2	31.87	14.27	10.33	2.72	7.17	2.93
2009	4.3	0.2	23.20	8.33	7.20	2.33	4.80	1.96
2010	5.2	0.2	40.00	11.55	26.67	9.33	11.20	3.44
2011	4.7	0.1	20.00	6.81	7.20	1.50	8.80	2.65
2012	4.8	0.2	28.80	4.63	13.60	3.92		

EFDMLLSF.D02
EFDMLLSF.D05-D12
EFDMLLSS.D03-D12
EFDMLLAS.D03, D09

Table 64. Length frequency and CPUE (fish/hr) of black bass collected in approximately 3.75 hours of 15-minute nocturnal electrofishing samples in Paintsville Lake (1,150 acres) on 10 April 2012; numbers in parentheses are standard errors.

		Inch class																						
Species/Area		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total	CPUE
Upper																								
	LMB	3	36	52	15	6	38	14	16	5	5	3			1				2	1		1	198	158.40 (33.50)
	SMB																						0	0.00 (0.00)
	SB	1	1	1	2	1	2	1	1	1													11	8.80 (1.96)
Middle																								
	LMB	9	11	13	9	4	22	21	15	4	1	8	3			1							121	96.80 (9.50)
	SMB																						0	0.00 (0.00)
	SB						2																2	1.60 (0.98)
Lower																								
	LMB	2	13	35	22	7	20	43	20	13	8	7	2		1						1		194	155.20 (21.70)
	SMB						1																1	0.80 (0.80)
	SB					1					1												2	1.60 (0.98)
Total																								
	LMB	14	60	100	46	17	80	78	51	22	14	18	5		2	1			2	1	1	1	513	136.80 (14.75)
	SMB						1																1	0.27 (0.27)
	SB	1	1	1	2	2	4	1	1	1	1												15	4.00 (1.17)

LMB = largemouth bass
SMB = smallmouth bass
SB= spotted bass
EFDPLLSS.D12

Table 65. Spring nocturnal electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Paintsville Lake (1,150 acres). SE = standard error.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
1988	6.81		10.55		1.62		0.29		0.00		19.30	
1989	15.43		16.01		3.42		0.85		0.00		36.30	
1990	34.00		31.33		2.67		2.00		0.00		70.00	
1991	26.55		33.09		12.00		0.36		0.40		72.00	
1992	16.43		43.96		21.26		0.72		0.00		82.37	
1993	16.36		26.33		22.50		2.81		0.63		68.00	
1994	34.00		47.40		26.60		3.56		0.27		111.60	15.60
1995						no sample						
1996						no sample						
1997	29.00		40.00		26.33		1.00		0.30		96.33	11.53
1998	25.70		87.69		26.34		0.00		0.00		139.70	17.90
1999	36.33		65.67		36.67		2.33		0.00		141.00	12.07
2000	12.67	4.97	95.00	19.57	27.00	7.83	2.00	0.78	0.00	0.00	136.67	27.97
2001	42.33	5.45	63.00	10.84	46.67	4.81	4.33	0.92	0.67	0.45	156.33	17.52
2002	41.80	1.80	70.50	2.70	36.00	1.40	2.20	0.20	0.00	0.00	150.90	14.20
2003	106.00	21.17	71.00	10.80	19.67	5.65	3.00	1.31	0.31	0.31	199.67	35.19
2004	62.67	10.90	92.00	19.20	17.00	3.40	2.00	0.90	0.00	0.00	173.70	25.40
2005	80.40	31.90	133.30	38.90	35.10	6.00	6.20	1.20	0.44	0.44	255.10	72.70
2006	30.55	4.43	65.11	12.57	13.60	1.92	2.64	1.12	0.00	0.00	111.91	14.27
2007	39.83	9.49	81.55	22.98	11.11	3.11	6.53	0.84	0.00	0.00	139.03	20.47
2008	37.80	6.55	79.25	11.91	9.84	1.75	3.96	1.56	0.39	0.39	130.84	14.14
2009	28.11	8.00	69.22	24.61	6.20	2.62	2.33	0.95	0.00	0.00	105.86	16.43
2010	51.20	16.39	86.40	11.56	13.33	1.73	5.60	1.09	1.87	0.53	156.53	26.31
2011	40.57	7.16	56.86	5.07	9.43	1.86	3.71	0.89	1.14	0.50	110.57	11.56
2012	63.20	10.53	61.60	6.99	9.87	1.60	2.13	0.66	1.33	0.50	136.80	14.75

EFDPLLSS.D88-D12

Table 66. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples in each area of Paintsville Lake (1,150 acres) on 10 April 2012; 95% confidence intervals are in parentheses; largemouth bass stock size ≥8.0 in and spotted bass stock size ≥7.0 in.

	Largemouth bass			Spotted bass		
Area	No.	PSD	RSD_{15}	No.	PSD	RSD_{14}
Upper	86	15 (8-23)	6 (1-11)	6	17 (0-49)	0
Middle	75	17 (9-26)	1 (0-4)	2	0	0
Lower	115	17 (10-23)	2 (0-4)	2	50 (25-75)	0
Total	276	16 (12-21)	3 (1-5)	10	20 (0-46)	0

EFDPLLSS.D12

Table 67. Spring nocturnal electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Paintsville Lake (1,150 acres).

	Year												
Age	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
1	11.80	41.00	41.20	95.18	54.60	75.60	43.52	43.97	51.50	35.64	58.13	35.59	54.76
2	68.80	29.70	50.30	51.15	81.80	104.10	53.22	77.57	66.06	61.88	78.97	43.38	52.66
3	42.60	65.70	42.80	19.45	22.40	55.60	8.08	9.91	6.90	3.34	10.09	11.44	12.66
4	7.10	9.60	8.70	10.32	9.60	8.70	4.01	2.37	2.94	2.16	3.03	15.95	13.38
5	2.90	3.90	3.90	4.46	2.60	4.10	2.10	1.52	1.45	0.52	1.60	0.50	0.37
6	1.70	2.80	2.50	1.28	1.10	1.90	0.66	0.43	0.40		0.44	0.86	0.00
7				0.31		0.40						1.14	0.27

EFDPLLSS.D00-D12
EFDPLLAS.D03
EFDPLLAS.D06
EFDPLLAS.D11

Table 68. Spring nocturnal electrofishing population assessments for largemouth bass collected in Paintsville Lake (1,150 acres). Actual values are in parentheses. Scoring based on statewide assessment.

	Year										
Parameter	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Mean length age-3 at capture	2 (11.4)	2 (11.4)	2 (11.4)	2 (11.4)	3 (11.7)	3 (11.7)	3 (11.7)	3 (11.7)	3 (11.7)	1 (10.6)	1 (10.6)
Spring CPUE age 1	3 (41.20)	4 (95.18)	4 (61.44)	4 (75.60)	3 (43.52)	3 (43.97)	4 (51.50)	2 (35.64)	4 (58.13)	2 (35.59)	3 (45.76)
Spring CPUE 12.0-14.9 in	4 (36.00)	2 (19.67)	2 (17.00)	4 (35.10)	1 (13.60)	1 (11.11)	1 (9.84)	1 (6.20)	1 (13.33)	1 (9.43)	1 (9.87)
Spring CPUE ≥15.0 in	1 (2.20)	1 (3.00)	1 (2.00)	2 (6.20)	1 (2.64)	2 (6.53)	1 (3.96)	1 (2.33)	2 (5.60)	1 (3.71)	1 (2.13)
Spring CPUE ≥20.0 in	0 (0.00)	2 (0.31)	0 (0.00)	2 (0.44)	0 (0.00)	0 (0.00)	2 (0.39)	0 (0.00)	3 (1.87)	2 (1.14)	2 (1.33)
Total score	10	11	9	14	8	9	11	7	13	7	8
Assessment rating	Fair	Fair	Fair	Good	Fair	Fair	Fair	Poor	Good	Poor	Fair
Instantaneous mortality (z)	0.83	0.95	1.15	1.10	1.02	1.16	1.17	1.12	1.18	0.57	0.77
Annual mortality (A)	56.50	61.30	68.20	66.60	63.80	68.60	69.10	67.40	69.40	83.70	53.80

EFDPLLSS.D02-D12
EFDPLLAS.D03, D06, D11

Table 69. Length frequency and CPUE (fish/hr) of black bass collected in 3.75 hours of 15-minute nocturnal electrofishing samples in Paintsville Lake (1,150 acres) 16 October 2012; numbers in parentheses are standard errors.

Area/	Inch class																				CPUE	
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total		
Lower																						
SMB		1	1																	2	1.60	(0.98)
SB								1												1	0.80	(0.80)
LMB	5	19	17	11	6	31	36	27	10	6	1	3	3	1	2	3	1		2	184	148.00	(19.31)
Middle																						
SMB																				0	0.00	(0.00)
SB	1	1		1	1			1	1	1										7	5.60	(2.04)
LMB	14	27	27	11	2	28	21	13	3	1	1	1								149	119.20	(29.35)
Upper																						
SMB					1															1	0.80	(0.80)
SB	3	4	3	4	5	1	1													21	16.80	(5.28)
LMB	2	30	55	4	22	49	20	9	5	1	1	1					1			200	160.00	(25.20)
Total																						
SMB		1	1		1															3	0.80	(0.43)
SB	4	5	3	5	6	1	1	2	1	1										29	7.73	(2.51)
LMB	21	76	99	26	30	108	77	49	18	8	3	5	3	1	2	3	2		2	533	142.40	(14.11)

LMB = largemouth bass
SMB = smallmouth bass
SB= spotted bass
EFDPLLSF.D12

Table 70. Mean back-calculated length (in) at each annulus for largemouth bass collected from Paintsville Lake (1,150 acres) on 15 October 2012, including 95% confidence intervals.

Year class	No.	Age 1	2	3	4	5	6	7	8
2011	29	5.4							
2010	26	5.5	8.8						
2009	15	5.2	9.1	11.2					
2008	4	6.0	9.9	12.4	14.3				
2007	4	6.0	9.6	11.8	13.7	15.3			
2006	4	6.4	10.1	12.3	14.0	15.3	16.8		
2005	1	6.1	9.2	12.3	15.7	17.2	18.4	20.3	
2004	1	7.5	10.5	13.3	15.1	17.2	19.0	19.6	20.5
Mean		5.5	9.2	11.7	14.2	15.7	17.4	19.9	20.5
Smallest		3.7	7.4	9.5	11.1	11.6	12.4	19.6	20.5
Largest		8.2	12.1	15.1	17.9	19.4	21.2	20.3	20.5
STD error		0.1	0.1	0.3	0.5	0.8	1.2	0.3	
95% CI LO		5.4	8.9	11.2	13.3	14.2	15.0	19.3	
95% CI HI		5.7	9.4	12.3	15.1	17.2	19.8	20.6	

Intercept = 0
EFDPLLAF.D12

Table 71. Nocturnal electrofishing indices of year class strength at age-0 and age-1 and mean lengths (in) of largemouth bass collected at Paintsville Lake (1,150 acres); CPUE = fish/hr.

	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
Year class	Mean length	Standard error	CPUE	Standard error	CPUE	Standard error	CPUE	Standard error
2002							95.18	20.09
2003	4.8	0.1	31.30	6.10	14.00	2.20	61.44	10.70
2004	5.1	0.1	65.67	10.80	37.33	8.60	75.60	29.20
2005	4.5	0.1	46.00	9.60	10.70	2.70	43.52	5.88
2006	4.9	0.1	72.40	12.00	33.60	5.10	43.97	8.37
2007	5.1	0.1	52.35	24.04	30.20	15.57	51.50	7.28
2008	4.6	0.1	24.84	8.75	8.07	5.15	35.64	9.68
2009	4.6	0.1	64.57	13.30	23.08	10.74	58.13	17.64
2010	4.6	0.1	86.40	19.52	31.47	6.89	35.59	6.66
2011	5.1	0.1	36.29	7.20	19.71	4.31	54.76	9.52
2012	5.0	0.1	58.13	10.59	32.27	7.25		

EFDPLLSF.D03-D12
EFDPLLSS.D02-D12
EFDPLLAS.D03, D06, D11

Table 72. Length frequency and electrofishing CPUE (fish/hr) of largemouth bass collected at Pan Bowl Lake (98 acres) during 1.0 hour of 7.5 minute daytime runs on 12 April 2012; numbers in parentheses are standard errors.

Inch class																					
3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	
2	9	4	1	21	27	11	26	17	3						1			1	123	123.00	(21.85)

EFDPBLSS.D12

Table 73. Spring daytime electrofishing catch-per-unit-effort (CPUE) for each length group of largemouth bass collected at Pan Bowl Lake (98 acres). Nocturnal electrofishing was used 1992-2000. CPUE = fish/hour, SE = standard error.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
1992	19.43		22.28		14.28		25.71		1.14		81.71	
1993	no data											
1994	no data											
1995	no data											
1996	20.00		56.00		9.00		14.00		2.00		99.00	27.44
1997	12.10		39.52		8.06		15.32		0.81		75.00	19.89
1998	26.00		20.00		5.00		10.00		3.00		61.00	20.60
1999	17.33		24.67		30.00		15.33		4.00		87.33	22.73
2000	34.00		52.00		18.00		34.67		8.67		138.67	21.75
2001	no data											
2002	no data											
2003	28.80	10.20	47.20	9.60	12.00	1.30	25.60	4.10	3.20		113.60	20.50
2004	no data											
2005	12.80	4.10	65.80	13.30	9.40	3.60	18.00	4.30	1.80		106.00	18.90
2006	no data											
2007	90.29	26.63	149.71	20.19	12.57	3.85	22.86	4.43	6.86	2.72	275.43	39.19
2008	28.00	10.03	91.00	15.56	21.50	6.37	18.00	4.72	7.00	1.81	158.50	26.87
2009	50.39	8.36	119.96	17.79	11.22	3.15	8.43	2.18	2.87	1.40	190.01	22.62
2010	72.00	22.53	105.00	19.39	7.00	2.80	10.00	2.93	2.00	1.31	194.00	32.06
2011	102.00	10.88	108.00	11.90	11.00	3.00	4.00	3.02	1.00	1.00	225.00	19.97
2012	37.00	10.68	81.00	13.89	3.00	2.10	2.00	2.00	1.00	1.00	123.00	21.85

EFDPBLSS.D03-D12

Table 74. PSD and RSD_{15} values for largemouth bass taken in spring electrofishing samples in Pan Bowl Lake (98 acres) on 12 April 2012; 95% confidence intervals are in parentheses.

No.	PSD	RSD_{15}
86	6	2
	(1-11)	(0-6)

EFDPBLSS.D12

Table 75. Spring electrofishing catch rate (fish/hour) for each age of largemouth bass collected from Pan Bowl Lake (98 acres) from 2003-2012.

	Year							
Age	2003	2005	2007	2008	2009	2010	2011	2012
1	19.20	3.42	72.00	17.00	43.86	51.00	95.00	16.00
2	32.00	53.68	92.11	51.40	54.42	69.60	44.00	56.80
3	15.38	14.77	45.03	32.91	46.02	35.71	45.46	27.86
4	10.05	7.5	30.29	21.83	25.81	19.33	26.11	16.41
5	10.30	10.09	14.10	13.86	9.69	7.36	9.43	4.26
6	10.40	6.84	4.57	6.50	3.45	2.00	4.00	0.00
7	2.53	3.56	4.95	2.50	2.16	1.00		0.33
8	5.60	3.42	8.00	7.00	0.90	2.00		1.00
9	1.73	2.71	4.38	2.50	1.92	1.00		0.33

EFDPBLSS.D03, D05, D07-D12
EFDPBLAS.D07

Table 76. Population assessments for largemouth bass collected during spring at Pan Bowl Lake (98 acres). Actual values are in parentheses. Scoring based on statewide assessment.

	Year							
Parameter	2003	2005	2007	2008	2009	2010	2011	2012
Mean length age 3 at capture	2 (10.5)	2 (10.5)	2 (10.5)	2 (10.5)	2 (10.5)	2 (10.5)	2 (10.5)	2 (10.5)
Spring CPUE age 1	2 (19.20)	1 (3.42)	3 (72.00)	2 (17.00)	2 (43.86)	3 (51.00)	4 (95.00)	2 (16.00)
Spring CPUE 12-14.9 in	1 (12.00)	1 (9.40)	1 (12.60)	2 (21.50)	1 (11.22)	1 (7.00)	1 (11.00)	1 (3.00)
Spring CPUE ≥ 15.0 in	3 (25.60)	3 (18.00)	3 (22.86)	3 (18.00)	2 (8.43)	2 (10.00)	2 (4.00)	1 (2.00)
Spring CPUE ≥ 20.0 in	3 (3.20)	2 (1.80)	4 (6.86)	4 (7.00)	3 (2.87)	3 (2.00)	2 (1.00)	2 (1.00)
Total score	11	9	13	13	10	11	11	8
Assessment rating	Fair	Fair	Good	Good	Fair	Fair	Fair	Fair
Instantaneous mortality (z)	0.36	0.37	0.43	0.42	0.62	0.65	0.54	0.58
Annual mortality (A)	30.30	31.20	35.20	34.10	46.10	47.60	41.90	44.30

EFDPBLSS.D03, D05, D07-D12
EFDPBLAS.D07

Table 77. Length frequency and electrofishing CPUE (fish/hr) of largemouth bass collected in approximately 0.75 hours of 7.5-min. electrofishing runs in Pikeville City Lake (20 acres) on 3 April 2012; numbers in parentheses are standard errors.

Inch class																			
4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE	
2			4		3	2		1	1	1	5	3	6	8	4	1	41	54.67	(9.10)

EFDHALSS.D12

Table 78. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Pikeville City Lake (20 acres). SE = standard error.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2004	5.13	2.60	12.82	12.80	15.38	7.70	30.77	8.90	2.56		64.10	2.60
2005	12.80	4.30	11.50	3.30	1.30	1.30	51.30	9.50	8.90		76.90	8.10
2006	5.07	2.54	34.81	4.11	3.98	2.73	49.01	6.22	1.30		92.87	9.05
2007	43.20	15.09	11.20	3.20	8.00	4.38	46.40	6.88	6.40	2.99	108.80	24.34
2008	10.67	3.37	48.00	7.45	10.67	2.67	50.67	7.35	10.67	4.92	120.00	16.65
2009	22.67	4.81	18.67	4.92	9.33	3.21	25.33	4.81	8.00	2.07	76.00	6.11
2010	22.86	3.23	21.71	5.44	21.71	7.55	52.57	4.89	8.00	1.75	118.86	10.09
2011						no sample						
2012	8.00	2.92	6.67	2.46	4.00	2.73	36.00	6.77	1.33	1.33	54.67	9.10

EFDHALSS.D04-D12

Table 79. PSD and RSD_{15} values obtained for largemouth bass species taken in spring electrofishing samples in Pikeville City Lake (20 acres) on 3 April 2012; 95% confidence intervals are in parentheses.

No.	PSD	RSD_{15}
35	86	77
	(74-97)	(63-91)

EFDHALSS.D12

Table 80. Species composition, relative abundance and CPUE (fish/hr) of black bass collected in approximately 2.75 hours of 15-minute electrofishing samples at Yatesville Lake (2,280 acres) on 16 May 2012; numbers in parentheses are standard errors.

Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE	
Upper	LMB		5	10	10	5	23	21	5	8	8	13	10	4	1	2			1	126	100.80	(12.03)
	SB			1				1	1											3	2.40	(2.40)
Lower	LMB		8	14	3	3	35	15	10	6	4	10	9	4	6		2		1	130	104.00	(18.24)
	SB	3	2	1	5	5	2	1	3			2								24	19.20	(10.07)
Total	LMB		13	24	13	8	58	36	15	14	12	23	19	8	7	2	2		2	256	102.40	(10.31)
	SB	3	2	2	5	5	2	2	4		2									27	10.80	(5.63)

LMB =l argemouth bass
SB = spotted bass
EFDYLLSS.D12

Table 81. Spring nocturnal electrofishing CPUE (fish/hr) for each length group of largemouth bass at Yatesville Lake (2,280 acres). SE = standard error.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
1993	153.70		82.90		20.10		7.40		0.00		264.00	
1994						no sample						
1995						no sample						
1996	21.50		65.50		7.80		1.50		0.00		96.30	11.50
1997	50.70		23.70		16.70		2.00		0.00		93.00	10.50
1998	10.70		25.70		16.30		5.70		0.00		58.30	7.20
1999	42.70		29.00		16.30		13.70		0.30		101.70	12.20
2000	63.30	8.00	55.70	7.90	9.30	1.10	7.00	1.60	0.00		135.50	13.70
2001	35.00	7.00	58.30	7.50	19.30	3.20	9.70	2.10	0.30		122.30	7.80
2002	54.30	7.80	50.00	4.40	19.30	2.90	16.70	3.20	0.00		140.30	7.40
2003						no sample						
2004	12.67	2.80	40.33	10.50	23.67	5.10	9.00	2.20	0.00		85.67	19.40
2005	43.70	7.80	61.30	6.60	42.00	4.70	21.70	2.10	0.30		168.70	15.40
2006	47.30	7.40	68.00	10.30	20.30	2.20	16.00	4.00	0.70		151.70	17.50
2007	47.70	5.91	62.25	5.71	31.33	4.15	15.78	2.65	0.00		157.05	10.65
2008	47.01	8.37	38.29	3.80	20.36	3.68	16.60	4.85	0.00		122.27	10.32
2009	28.63	5.35	68.31	7.47	30.56	2.80	16.57	3.15	0.00		144.07	9.68
2010	44.00	6.32	57.00	8.73	19.33	3.81	11.00	2.79	0.67	0.45	131.33	11.71
2011						no sample						
2012	23.20	2.78	49.20	7.35	21.60	2.61	8.40	2.10	0.80	0.53	102.40	10.31

EFDYLLSS.D93, D96-D02, D04-D10, D12

Table 82. PSD and RSD values for black bass species taken in spring electrofishing samples in each area of Yatesville Lake (2,280 acres) on 16 May 2012; 95% confidence intervals are in parentheses; largemouth bass stock size ≥8.0 in and spotted bass stock size ≥7.0 in.

	Largemouth bass			Spotted bass		
Area	No.	PSD	RSD_{15}	No.	PSD	RSD_{14}
Upper	96	41 (31-51)	8 (3-14)	2	0	0
Lower	102	35 (26-45)	13 (6-19)	13	15 (0-36)	0
Total	198	38 (31-45)	11 (6-15)	15	13 (0-31)	0

EFDYLLSS.D12

Table 83. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Yatesville Lake (2,280 acres) from 2000-2012.

	Year										
Age	2000	2001	2002	2004	2005	2006	2007	2008	2009	2010	2012
1	59.70	32.20	52.10	13.00	42.30	45.93	46.98	44.95	28.22	42.63	19.42
2	56.00	54.90	46.60	35.70	54.90	69.67	63.65	40.61	69.39	58.29	46.09
3	11.30	23.40	22.70	23.60	43.00	16.32	23.12	15.92	22.95	14.91	17.14
4	5.70	8.50	16.40	11.90	23.20	15.67	18.54	16.38	18.67	11.40	14.66
5	1.10	1.20	1.00	0.60	1.90	3.41	4.77	3.78	3.74	2.44	2.93
6	1.60	1.80	1.20	0.90	2.80	0.33				0.33	2.16
7		0.00									
8		0.30									

EFDYLLSS.D00-D02, D04-D10, D12
EFDYLLAS.D05, D06, D12

Table 84. Mean back-calculated length (in) at each annulus for largemouth bass collected from Yatesville Lake (1,150 acres) on 16 May 2012, including 95% confidence intervals.

Year class	No.	Age 1	2	3	4	5	6
2011	29	5.3					
2010	40	6.1	9.1				
2009	22	6.0	9.8	12.4			
2008	17	6.3	9.5	12.0	14.2		
2007	5	5.6	9.3	11.8	13.9	16.0	
2006	3	7.1	10.9	13.7	15.5	17.0	18.3
Mean		5.9	9.4	12.3	14.3	16.4	18.3
Smallest		4.1	6.7	9.2	11.1	13.6	16.0
Largest		8.5	12.5	14.4	17.2	18.5	20.3
STD error		0.1	0.1	0.2	0.3	0.6	1.3
95% CI LO		5.7	9.2	11.9	13.7	15.2	15.9
95% CI HI		6.1	9.7	12.6	14.9	17.6	20.8

Intercept = 0
EFDYLLAS.D12

Table 85. Spring nocturnal electrofishing population assessments for largemouth bass collected at Yatesville Lake (2,280 acres). Actual values are in parentheses. Scoring based on statewide assessment.

Parameter	Year 2002	2004	2005	2006	2007	2008	2009	2010	2012
Mean length age-3 at capture	4 (13.2)	4 (13.2)	4 (13.2)	4 (13.5)	4 (13.5)	4 (13.5)	4 (13.5)	4 (13.5)	3 (12.4)
Spring CPUE age 1	4 (52.10)	1 (13.00)	3 (42.30)	3 (45.93)	3 (46.98)	3 (44.95)	2 (28.22)	3 (42.63)	1 (19.42)
Spring CPUE 12.0-14.9 in	2 (19.30)	2 (23.70)	4 (42.00)	2 (20.30)	3 (31.33)	2 (20.36)	3 (30.56)	2 (19.33)	2 (21.60)
Spring CPUE ≥15.0 in	3 (16.70)	2 (9.00)	4 (21.70)	3 (16.00)	3 (15.78)	3 (16.60)	3 (16.57)	2 (11.00)	2 (8.40)
Spring CPUE ≥20.0 in	0 (0.00)	0 (0.00)	2 (0.30)	2 (0.70)	0 (0.00)	0 (0.00)	0 (0.00)	2 (0.67)	2 (0.80)
Total score	14	10	17	14	13	12	12	13	10
Assessment rating	Good	Fair	Excellent	Good	Good	Good	Good	Good	Fair
Instantaneous mortality (z)	0.86	1.07	0.91	1.23	0.80	0.70	0.91	1.22	0.79
Annual mortality (A)	57.80	65.80	59.80	70.70	55.20	50.20	59.80	70.40	54.60

EFDYLLSS.D02-D10, D12
EFDYLLAS.D05, D06, D12

Table 86. Length frequency and nocturnal electrofishing CPUE (fish/hr) of black bass collected at Yatesville Lake (2,280 acres) during 1.75 hours of 15 minute samples on 2 October 2012; numbers in parentheses are standard

Area/	Inch class																					
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE	
Lower																						
LMB		4	41	35	5	7	12	10	8	4	3		2	2				1		134	178.67	(45.33)
SB			2	1	1	2	1		1		1									9	12.00	(6.11)
Upper																						
LMB		2	19	31	8	8	22	20	10	4	1	1		1	1	1				129	129.00	(2.83)
SB								1		2	1									4	4.00	(11.39)
Total																						
LMB	0	6	60	66	13	15	34	30	18	8	4	1	2	3	1	1	0	1	0	263	150.29	(23.26)
SB	0	0	2	1	1	2	1	1	1	2	2	0	0	0	0	0	0	0	0	13	7.43	(3.20)

LMB = largemouth bass
SB= spotted bass
EFDYLLSF.12

Table 87. Fall electrofishing indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected during 2003 - 2012 at Yatesville Lake (2,280 acres); CPUE = fish/hr, SE = standard error.

	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
Year class	Mean length	SE	CPUE	SE	CPUE	SE	CPUE	SE
2003	5.3	0.1	46.00	6.30	29.30	4.40	12.70	2.80
2004	4.8	0.1	69.50	13.50	32.50	10.80	42.30	7.10
2005	4.7	0.1	47.00	12.30	20.00	7.10	45.93	7.21
2006	4.9	0.1	29.50	7.80	13.80	3.80	46.98	5.95
2007	5.3	0.1	37.36	10.64	23.22	6.12	44.95	8.09
2008	5.1	0.1	45.93	7.78	28.42	6.00	28.22	5.28
2009	4.9	0.1	32.67	6.45	16.33	3.95	42.63	6.40
2010	5.1	0.1	78.55	11.53	45.09	8.65	no sample	
2011	4.9	0.1	55.33	9.55	28.67	4.89	19.42	2.48
2012	5.0	0.1	82.86	19.99	45.14	10.06		

EFDYLLSS.D03-D10, D12
EFDYLLSF.D03-D12
EFDYLLAS.D05, D06, D12

Table 88. Length frequency and CPUE (fish/nn) for white crappie collected at Yatesville Lake (2,280 acres) in 22 net-nights from 19 to 21 November 2012. Standard errors are in parentheses.

Inch class															
3	4	5	6	7	8	9	10	11	12	13	14	Total	CPUE	SE
29	155	359	169	109	64	31	9	10	22	7	9	973	44.23	(5.64)

Table 89. PSD and RSD_{10} values calculated for white crappie collected in trap nets at Yatesville Lake (2,280 acres) during November 2012; 95% confidence intervals are in parentheses.

No. ≥ 5.0 in	PSD	RSD_{10}
789	19 (17-22)	7 (5-9)

WC = white crappie
EFDYLCTF.D12

Table 90. Mean back-calculated length (in) at each annulus for white crappie collected from Yatesville Lake (2,280 acres) in November 2012, including 95% confidence intervals.

Year class	No.	Age							
		1	2	3	4	5	6	7	8
2012	0								
2011	5	3.6							
2010	7	4.0	5.5						
2009	32	3.7	5.0	5.8					
2008	29	4.3	5.7	7.0	8.2				
2007	41	4.3	5.7	7.0	8.0	9.2			
2006	9	4.2	5.8	7.1	8.1	9.6	10.5		
2005	10	4.3	5.6	6.7	7.8	9.0	10.3	11.3	
2004	3	4.6	6.2	7.4	8.4	9.4	10.2	11.3	12.5
Mean		4.1	5.5	6.7	8.1	9.2	10.4	11.3	12.5
Smallest		2.8	3.7	4.3	4.7	5.0	5.6	5.8	11.9
Largest		5.3	7.5	9.2	10.4	12.5	13.4	13.9	13.4
STD error		0.0	0.1	0.1	0.1	0.3	0.6	0.8	0.5
95% CI LO		4.0	5.4	6.5	7.8	8.7	9.3	9.8	11.5
95% CI HI		4.2	5.7	6.9	8.3	9.7	11.5	12.8	13.4

Intercept = 0
EFDYLCAF.D12

Table 91. Age frequency and CPUE (fish/nn) of white crappie collected by trap netting for 22 net-nights at Yatesville Lake (2,280 acres) in November 2012; numbers in parentheses are standard errors.

	Inch class															
Age	2	3	4	5	6	7	8	9	10	11	12	13	14	Total	Age%	CPUE
0		29	78											107	11	4.84 (0.85)
1			78	20										98	10	4.43 (0.68)
2				80		6		4						90	9	4.10 (0.71)
3				219	70	79	11							379	39	17.24 (2.82)
4					28	12	32	11	5	6				94	10	4.26 (0.70)
5				20	42	6	18	16	3	3	18	3	1	130	13	5.91 (0.98)
6				20	14				1	1		3	3	42	4	1.88 (0.29)
7					14	6	4				1	1	5	31	3	1.40 (0.23)
8											3		1	4	0	0.16 (0.06)
Total	0	29	156	359	168	109	65	31	9	10	22	7	10	975	100	
%	0	3	16	37	17	11	7	3	1	1	2	1	1	100		

CPUE of ≥8 in (quality size) = 6.91

CPUE of ≥10 in (preferred size) = 2.59

EFDYLCAF.D12

EFDYLCTF.D12

Table 92. Population assessment scores for white crappie collected from Yatesville Lake (2,280 acres). Actual assessment values are in parentheses. Scoring based on statewide assessment.

Parameter	Year				
	2002	2004	2006	2009	2012
CPUE (excluding age 0)	3 (19.50)	4 (28.20)	4 (58.60)	4 (26.39)	4 (39.39)
CPUE age 1	2 (3.90)	2 (3.70)	3 (8.90)	3 (7.47)	2 (4.43)
CPUE age 0	1 (1.50)	4 (23.90)	2 (3.60)	3 (5.97)	2 (4.84)
CPUE $\geq$ 8.0 in	2 (3.00)	2 (4.80)	4 (13.60)	2 (2.19)	3 (6.91)
Mean length age 2 at capture	1 (6.1)	1 (5.6)	1 (6.0)	1 (5.5)	1 (6.8)
Instantaneous mortality (z)	1.08	0.59	0.98	1.01	0.43
Annual Mortality (A)	66.0	45.0	62.4	63.6	34.9
Total score	9	13	14	13	12
Assessment rating	Fair	Good	Good	Good	Fair

EFDYLCTF.D02, D04, D06, D09, D12
EFDYLCAF.D02, D04, D06, D09, D12